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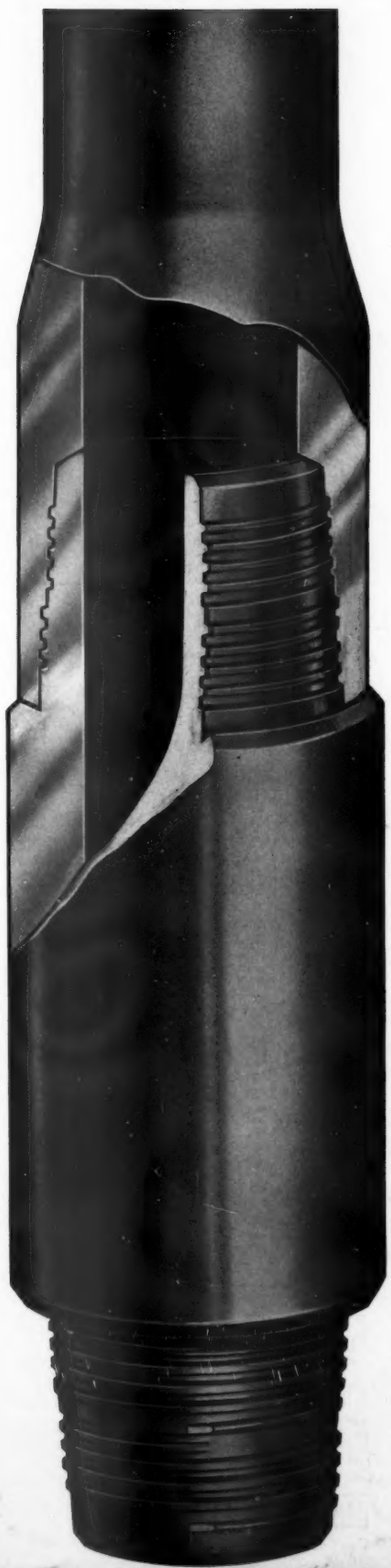

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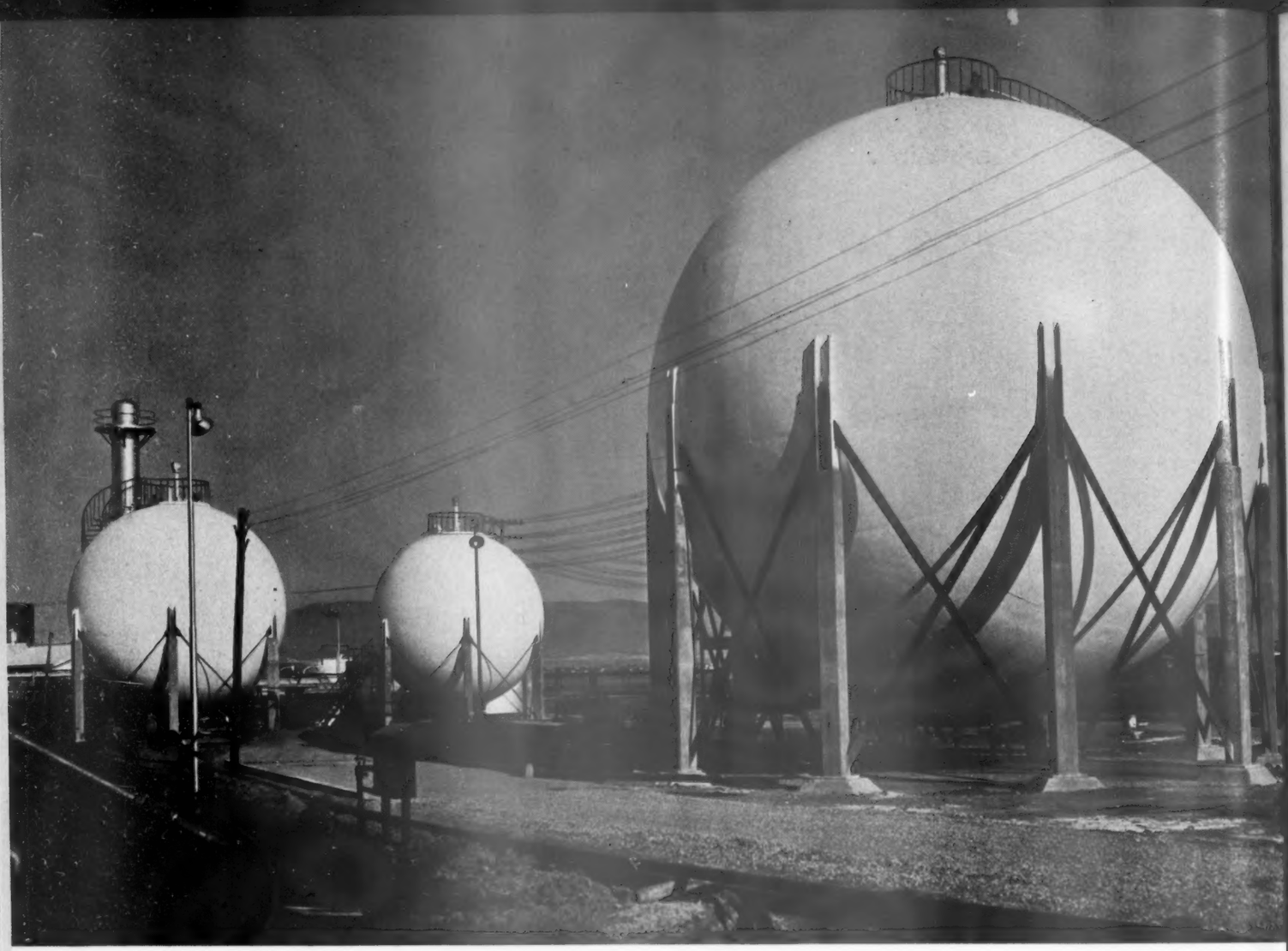

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From HORSES to Horsepower!

THE automobile, truck and the tractor have brought a new era to farm life. With them came long smooth stretches of concrete highways and Farmer Jones of Iowa now knows Farmer Brown of California. With the automobile came Natural Gasoline—an Industry small in the beginning, for the daily capacity of the first Hanlon plant built in 1908, was only a few barrels per day. Today Hanlon-Buchanan supplies domestic, coastwise and foreign markets with thousands of barrels daily of uniform high quality Stabilized Natural Gasoline.

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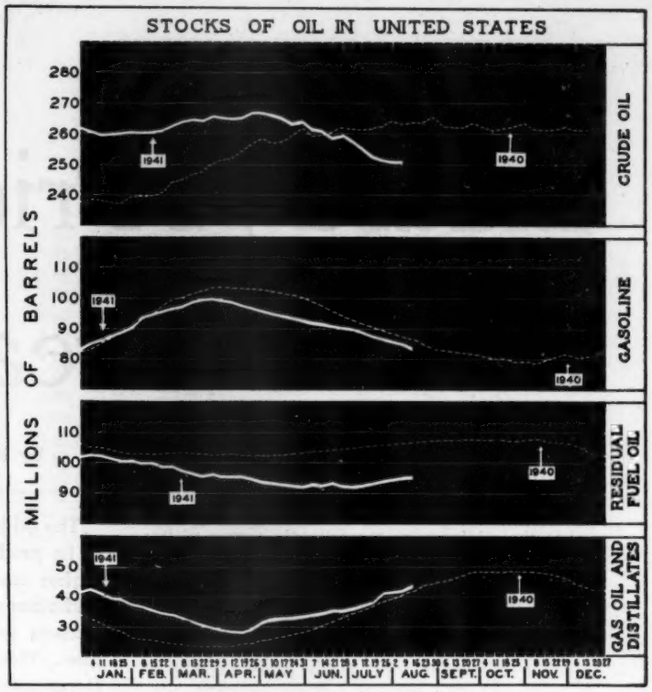
Trends

Establish New Peaks In Supply-Demand for Crude and Products



THE petroleum industry in the United States is approaching the close of the principal gasoline-consuming period with many new records in production and consumption assured for the closing month of the summer season. Last week the daily-average output of 3,960,000 bbl. established a new peak in the production of crude oil and further increases may materialize within the next 3 weeks. Including the natural-gasoline output, the production from 390,000 wells now totals in excess of 4,100,000 bbl. daily with a total national demand at this time including imports of approximately 4,350,000 bbl. daily. This supply and demand is 45 per cent greater than the average production of 1929, a year to which many industries have to look back for the highest operating period in their history.

To maintain these operations, well completions are now running close to 700 weekly. This rate of 35,000 yearly based on footage also establishes a new record for the industry in this country. Refinery operations which exceeded 4 million barrels daily of crude to stills 1 week last month are maintaining a larger output of the principal plant products than ever before. Recent reports also showed that the movement of crude oil and refinery products by pipe lines will establish new records during the third quarter. Statisticians see no changes in this situation—except the seasonal adjustments—over the next 4 months providing no large reductions in consumption materialize due to a shortage of transportation.

Without taking into consideration the effects of possible rationing, one of the largest companies now estimates that this year's increased demand for petroleum products in the United States over 1940 will be 11.31 per cent and for the Western Hemisphere, 10.38 per cent. These gains if they materialize will be the industry's largest yearly increase.

The announcement Saturday that suppliers in 16 eastern states and District of Columbia by order of OPACS would reduce their gasoline deliveries to stations 10 per cent is not believed to be the final move in the Government's efforts to reduce consumption in that area. The rationing plan is still too involved to permit of satisfactory application. It is felt that the use of consumer rationing cards will be necessary before any substantial reduction in motor-fuel use will materialize. This method of enforced rationing would require legislation, the approval of which is considered doubtful at this time.

The 23 to 25-cent advance in Pennsylvania Grade crude oils was the most important development of the week. Owners of stripper wells, stressing increased operating costs, are now actively seeking higher posted prices for crude in southwestern states.

CRUDE PRODUCTION *3,960,635 bbl. daily average—up 61,395 bbl. One year ago 3,530,645 bbl.*

CRUDE STOCKS *251,945,000 bbl. as of August 9—down 590,000 bbl. One year ago 263,607,000 bbl.*

GASOLINE STOCKS **83,731,000 bbl. as of August 16—down 2,291,000 bbl. One year ago 86,470,000 bbl.*

RESIDUAL FUEL-OIL STOCKS *95,816,000 bbl. as of August 16 — up 404,000 bbl. One year ago 106,710,000 bbl.*

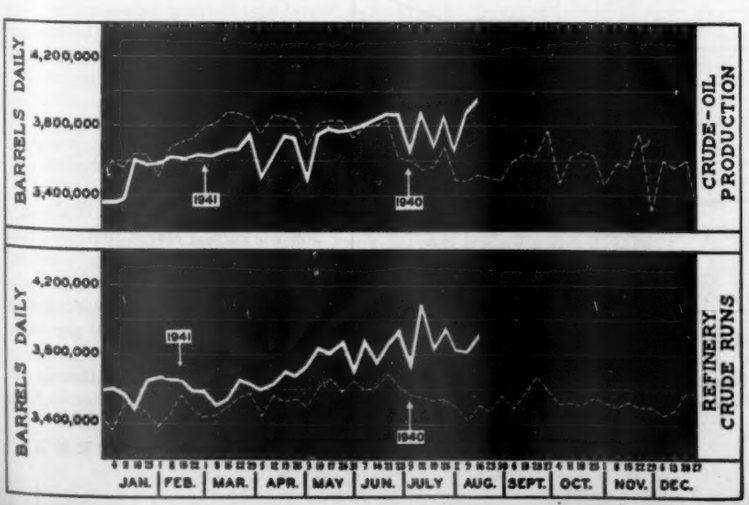
GAS OIL AND DISTILLATES *43,563,000 bbl. as of August 16—up 1,427,000 bbl. One year ago 42,136,000 bbl.*

REFINERY RUNS *3,920,000 bbl. daily week ended August 16 — up 85,000 bbl. One year ago 3,510,000.*

*Includes 7,698,000 bbl. aviation motor fuel, down 74,000 bbl. One year ago 5,617,000 bbl.

DAILY AVERAGE PRODUCTION FOR WEEK

	Aug. 16, 1941	Bur. Mines Aug. est. of demand	August state allowables	Aug. 9, 1941
Arkansas	74,215	80,700	74,428	73,580
California	654,750	641,000	610,000	650,450
Eastern fields	111,000	121,000	.....	112,000
Illinois	361,790	390,100	.....	350,845
Kansas	250,700	240,800	242,800	225,250
Louisiana	322,850	324,500	324,500	322,315
North Louisiana	*72,650*	.....	.....	*79,315*
Louisiana Gulf Coast	*250,200*	.....	.....	*243,000*
Michigan	42,300	36,000	.....	41,900
Mississippi	49,580	25,200	.....	47,825
Nebraska	5,800	4,400	.....	5,100
New Mexico	113,370	112,900	112,900	109,500
Oklahoma	418,200	492,400	415,000	413,475
Rocky Mountain states	110,180	109,400	.....	107,500
Texas	1,445,900	1,361,600	1,412,121	1,439,500
East Texas	*369,850*	.....	.....	*369,950*
West Texas	*271,550*	.....	.....	*272,650*
North Central Texas	*131,250*	.....	.....	*130,850*
East Central Texas	*84,100*	.....	.....	*83,200*
Texas Panhandle	*80,250*	.....	.....	*80,250*
Texas Gulf Coast	*412,650*	.....	.....	*406,900*
Southwest Texas	*96,250*	.....	.....	*95,700*
Total United States	3,960,635	3,940,000	.....	3,899,240
Total production, Jan. 1-Aug. 16, 1941		840,572,670 bbl.		
Same period last year		852,285,357 bbl.		



Industry's Price Structure Lags Behind Increasing Costs

By H. STANLEY NORMAN

The oil industry has not raised prices of its products sufficiently to offset the higher costs of materials, wages, taxes and other expenses of operating in comparison with other essential commodities. This conclusion is disclosed in Department of Labor statistics discussed in this analysis of the trend of price indices.

The index of petroleum prices averaged 50 for 1940, the same in January this year, and moved up only 1.9 points during the first 4 months. Slight additional gains have become effective since April but the record is still far below the increases of 4.2 points in the food index and 2.4 points on "all commodities."

Discussion of the petroleum-price index is particularly pertinent now in the face of OPACS' policy of curbing advances and the recent sharp increases in the cost of oil industry equipment, taxes, transportation, wages and other factors.

THREATENED elimination or drastic reduction of the 27.5 per cent depletion allowance along with rising costs and controlled prices have made the oil industry more keenly aware of its internal economic affairs.

Improvements in prices for petroleum products, chiefly in the second quarter of this year, have been insufficient to compensate for higher operating costs. Opposition of OPACS to any material upward adjustment of petroleum prices expressed in orders placing specific ceilings on California crude, Gulf Coast gasoline and Pennsylvania lubricating oils definitely removes the industry's freedom in protecting itself against rising operating costs.

Warning that the administration would attempt to reduce or entirely remove the depletion allowance of 27.5 per cent in the new tax bill was first sounded last January. Now, Congress has before it a direct recommendation from Henry Morgenthau, Jr., secretary of the Treasury, that the Government satisfy part of its need for more money by eliminating allowances to natural-resource industries. Oil men have successfully contended for several years that risks involved in finding oil and the nonrecurring nature of the product more than justified the depletion allowance.

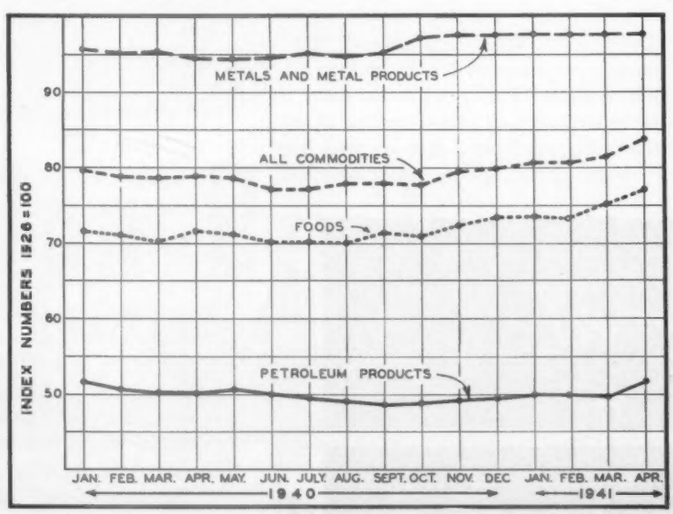
Petroleum Products Lowest Priced

Department of Labor statistics show that petroleum products are the lowest priced of any generally consumed commodity, based on 1926 records which are considered normal. The accompanying chart of index numbers on selected commodities shows the extent to which petroleum products lag behind various other essentials. The petroleum-products index is nearly 50 points below the curve for all commodities, almost 24 points below foods and about 44 points below metals and metal products. Even with price improvements that have occurred since April, the latest month for which full details are available from the Department of Labor, the relative positions of the curves are not materially changed. The wide discrepancy between the price index for petroleum products and that for metals and metal products is of particular interest to the oil industry. Metals make up a large part of the commodities consumed by the petroleum industry. The wholesale price index for metals stood at 97.9 at the end of April and since that time has increased to nearly 100, or approximately equal to the normal of 1926. From the 1940 low point of 48.9 in the wholesale price index for petroleum products, the gain to the end of April had been only 3 points. (See Table 1.) Metals gained 3.4 points, foods 7.8 points, and all commodities were 5.8 points higher. These figures show that the petroleum price index, previously far behind other basic commodities, responded less abruptly to the early influences of the defense program. Petroleum prices at the end of April, the high point for the current movement, had gained 1.9 points since the start of this year. The general-commodity index moved up 2.4 points, foods 4.2 points, and metals 0.2 point.

The comparatively narrow forward movement of petroleum-product prices becomes even more significant when examined in the light of the apparent determination of OPACS to hold markets for this commodity at depressed levels. The ceiling of 6 cents per gallon placed on 80-octane (Research method) gasoline on the Gulf Coast, for example, is the object of vigorous protests from refiners in that section who assert that this limit prevents them from realizing a reasonable profit on operations.

TABLE 1—WHOLESALE PRICE INDEX
1926 = 100

1940—	All commodities	Petroleum products	Foods	Metal and metal products
January ...	79.4	51.7	71.7	95.8
February ..	78.7	50.9	71.1	95.3
March	78.4	50.4	70.2	95.5
April	78.6	50.4	71.6	94.5
May	78.4	50.7	71.4	94.5
June	77.5	50.0	70.3	94.7
July	77.4	49.5	70.3	95.1
August	78.0	49.2	70.1	94.9
September .	78.0	48.9	71.5	95.4
October ...	78.7	49.0	71.1	97.3
November .	79.6	49.3	72.5	97.6
December .	80.0	49.5	73.5	97.6
1941—				
January ...	80.8	50.0	73.7	97.7
February ..	80.6	50.0	73.5	97.6
March	81.5	49.9	75.2	97.7
April	83.2	51.9	77.9	97.9



Showing wide discrepancy between the price index for petroleum products and that for metals and metal products, of which the industry is an enormous consumer. The former has responded less abruptly to the early influences of the defense program than have foods and all commodities

Wages in the oil industry are the highest paid by any major segment of business in the United States. Weekly earnings of refinery workers are the highest paid in the manufacturing industries reported by the Department of Labor, excepting a few of the more highly skilled crafts. Machine-tool makers, business-machine makers, workers in iron and steel forging and one or two other classifications are the only workers receiving higher wages than employes in petroleum refineries, according to the Department of Labor survey, which covers about 150 manufacturing industries.

The production branch of the oil business pays the highest wages of all nonmanufacturing industries reported by the Department of Labor. The weekly earnings of oil-production workers in March 1941 averaged $37.82. Refinery workers received $34.68 per week in the same month, and employes in all manufacturing averaged earnings of $29.11 per week during March.

Department of Labor figures on weekly earnings do not yet reflect

the wage advances of 5 per cent extended on a blanket basis by numerous firms in the oil industry during April, May, and June to all employes on an hourly scale.

Farm products, which dropped to within 2.8 index points of petroleum products in 1932, have since drawn ahead by 17 to 18 points. Fluctuations in other commodities were less violent as may be seen from the statistics in Table 2. One of the most significant points brought out in this table is the relative stability of all fuels. Petroleum products are included in the index for all fuels, meaning that most other types have enjoyed a comparatively high and steady market.

The increasing difficulties encountered in obtaining equipment needed for operation of the oil industry—here, the metals and metal products index is a key to costs—has been one of the factors in the insistence that higher prices are justified. The contention is backed with Department of Labor reports that higher costs in wages and for materials consumed by the oil industry argue against government imposition of ceilings on petroleum-product prices. Least of all, the industry's spokesmen argue, price-control measures should not be imposed until petroleum products reach a parity with costs of labor and commodities essential to its operation.

Threatened removal of the depletion allowance is just one of the many higher tax bills the petroleum industry faces. States, counties and municipalities are in general dipping deeper into the trough of industrial taxation. The petroleum industry has been a particularly lucrative source of government revenue. Higher corporate, income and property taxes are inevitable, according to the federal revenue bill which is assured congressional approval in substantially its present form. Too, there is the prospect that the federal gasoline tax will be advanced. The petroleum industry and numerous political factions have made a determined fight against higher federal gasoline taxes on the grounds that no other essential commodity in the United States is required to carry a tax equal to or in excess of its wholesale price. Taxes on gasoline during the first half of 1940 averaged nearly 6 cents per gallon, which was a fraction of a cent higher than most refiners received for the bulk of their motor fuel at their plants.

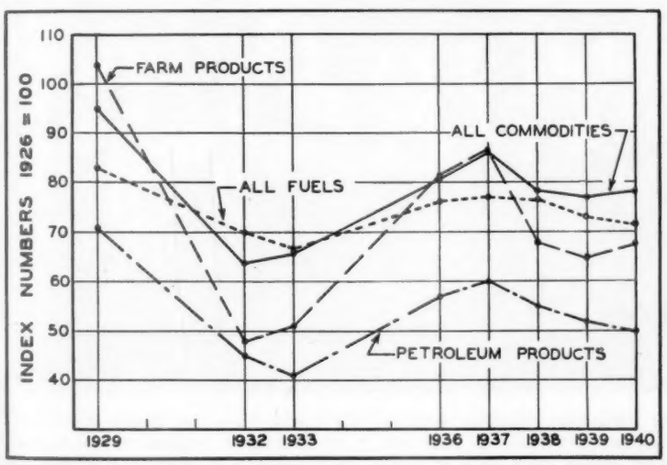
Priority control of equipment which threatens to become even more severe before defense requirements are satisfied has a distinct relationship to petroleum-product prices. For the first time in the history of the oil industry, leaders contend, there is a probable anomaly developing in the relationship of petroleum prices and the rate of exploration. Normally, higher prices stimulate exploration and result in acceleration of the rate of discoveries. This normally constant relationship between exploratory drilling and petroleum prices is, statisticians say, a fundamental function of economics. When prices for crude oil are high, the hazards of exploration offer greater possibilities of gain and, therefore, attract capital to this phase of petroleum operation. Converse of the concept obtains when petroleum prices are low and drilling is discouraged. Unfettered move-

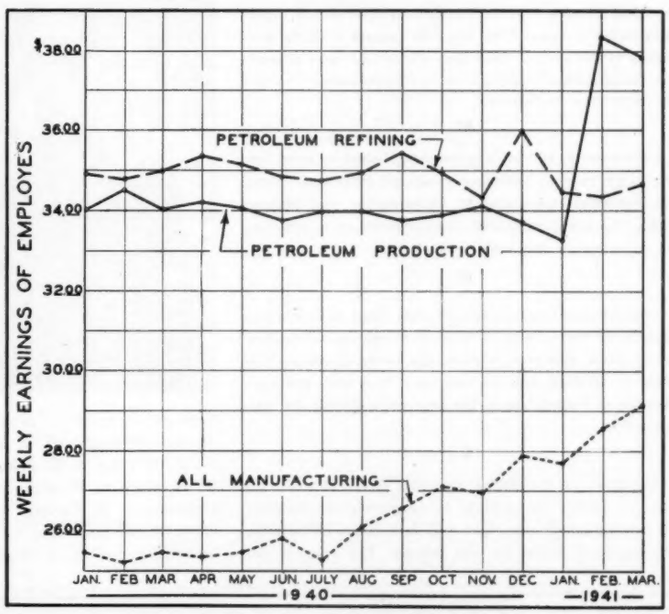
TABLE 3—AVERAGE PRICE OF 36-GRAVITY MID-CONTINENT CRUDE

	1937	1938	1939	1940	1941
January 1	$1.10	$1.22	$1.02	$1.02	$1.02
February 1	1.22	1.22	1.02	1.02	1.02
March 1	1.22	1.22	1.02	1.02	1.02
April 1	1.22	1.22	1.02	1.02	1.07
May 1	1.22	1.22	1.02	1.02	1.07
June 1	1.22	1.22	1.02	1.02	1.17
July 1	1.22	1.22	1.02	1.02	1.17
August 1	1.22	1.22	1.02	1.02	1.17
September 1	1.22	1.22	1.02	1.02	...
October 1	1.22	1.22	1.02	1.02	...
November 1	1.22	1.02	1.02	1.02	..
December 1	1.22	1.02	1.02	1.02	..

TABLE 2—WHOLESALE PRICE INDICES, 1929-1940

	1929	1932	1933	1936	1937	1938	1939	1940
All commodities	95.3	64.8	65.9	80.8	86.3	78.6	77.1	78.6
Petroleum products	71.3	45.4	41.0	57.3	60.5	55.9	52.2	50.0
All fuels	83.0	70.3	66.3	76.2	77.6	76.5	73.1	71.7
Farm products	104.9	48.2	51.4	80.9	86.4	68.5	65.3	67.7
Metals and metal products	100.5	80.2	79.8	87.0	95.7	95.7	94.4	95.8
Raw material, all classes	97.5	55.1	56.5	79.9	84.8	72.0	70.2	71.9
Chemicals	94.0	73.9	72.1	78.7	82.6	77.0	76.0	77.0





Above: Showing relative stability of all fuels, with which petroleum products are listed in the index. Right: Wages in the oil industry are the highest paid by any major segment of business in the United States. Weekly earnings of refinery workers are the highest in the manufacturing industries reported by the Department of Labor, excepting a few of the more highly skilled crafts

TABLE 4—EMPLOYMENT INDICES

(Data based on 3-year average, 1923-25 = 100)

	All manufacturing			Petroleum refining			Petroleum production		
1940—	Employment	Pay roll	Weekly earnings	Employment	Ray roll	Weekly earnings	Employment	Pay roll	Weekly earnings
January	100.7	97.9	25.45	121.3	135.6	34.92	63.2	58.4	34.02
February	101.4	97.8	25.20	120.9	134.4	34.78	63.0	59.0	34.51
March	100.8	98.2	25.46	121.3	135.8	34.96	63.2	58.4	34.02
April	99.6	96.3	25.33	121.1	136.9	35.34	63.1	59.0	34.20
May	99.0	96.3	25.43	121.8	136.8	35.14	63.3	58.7	34.05
June	99.4	97.9	25.79	123.2	137.1	34.84	63.8	58.8	33.74
July	99.7	96.8	25.25	122.9	136.6	34.73	63.7	59.1	33.97
August	103.8	104.0	26.10	122.7	137.4	34.94	63.6	59.0	33.99
September	107.7	110.0	26.54	122.6	139.3	35.43	63.0	58.2	33.98
October	113.8	116.2	27.13	121.2	136.2	34.93	62.4	57.6	33.89
November	114.7	116.4	26.93	120.7	133.3	34.32	61.3	56.8	34.11
December	116.2	122.4	27.89	119.8	139.0	36.00	60.7	55.8	33.70
1941—									
January	115.4	120.7	27.70	119.1	132.2	34.46	60.5	56.2	33.27
February	117.8	126.9	28.56	119.2	132.1	34.36	60.5	57.6	38.35
March	119.9	131.2	29.11	119.5	133.4	34.68	60.5	56.8	37.82

This Week...

Oklahoma Stripper Well Association seeks a 25-cent advance in Mid-Continent crude-oil postings. Points to higher operating costs and recent advances in Pennsylvania Grade area.

●

Sen. Charles Andrews, of Florida, has introduced a bill in the Senate which would create an independent petroleum coordinator's office headed by a coordinator holding no other federal office. He denies the bill is aimed at Mr. Ickes personally.

●

Mr. Ickes urged permanent continuation of the Connally "Hot Oil" Act in a letter to Sen. Tom Connally, author of the act. He asked that the senator sponsor a bill to make the act permanent.

●

Texas' "Oil for Britain" day was just another day. The idea came a cropper Sunday as few, if any, operators actually opened up wells to donate a day's production to the British. Less than 20,000 bbl. was offered. Too many difficulties, plus lack of enthusiasm, doomed the proposition to failure.

●

Southwestern railroads have established a new low rate of 44 cents a barrel on crude oil from East Texas and Southwest Louisiana to Philadelphia and Marcus Hook. The roads explained the decrease as a contribution to relieving the tanker shortage.

●

Pennsylvania Grade crude oil was lifted to its highest price in 11 years with a 23-25 cent advance late last week. Some observers viewed the increase as a challenge to OPACS and its policies. This was the fifth advance in Pennsylvania Grade crudes during the current year.

●

Settlement of the Elkins pipe-line cases is expected soon, as Justice Department is preparing an omnibus suit against companies, who will fare much better than they expected when the suit began. The consent decree will not directly affect rates, and will not require divorcement. Dividends will be limited to 7 per cent.

●

Tanker diversion has spread to the West Coast, with the embracing of Russia in the arms of the Lend-Lease Act. Four tankers will go into service transporting gasoline and diesel fuel to Vladivostok. The first tanker has already left.

●

OPACS, at Mr. Ickes' request, has ordered motor-fuel deliveries to East Coast suppliers cut 10 per cent below July deliveries. An interim measure, it is expected to be followed by a more drastic allocation plan soon.

●

Tank cars are transporting 16,000 bbl. of East Texas crude oil to the Bayway, N. J., refinery of Standard Oil Co. (N. J.) every 24 hours. New loading racks, scheduled for completion this week, will make it possible to handle 200 tank cars a day, if necessary.

●

American refiners will be asked to double the refinery capacity for 100-octane gasoline as quickly as possible. Plans for at least a 10-million-dollar expansion program have been announced.

●

Senate approves resolution, previously authorized by the House, authorizing extension of the interstate oil compact for another 2 years. The compact now goes to the president for his signature.

●

Texas' state-wide proration hearing was one of the shortest, if not the shortest, ever held. The session lasted only 20 minutes, and discussion of "oil for Britain" was conspicuous by its absence.

●

War Department adopts one standard type of gasoline which will replace the four varieties formerly in use. Other standardization measures are effected in regard to fuels for diesel-powered vehicles and crankcase oils.

Advisory chairmen of petroleum coordination committee meet with Coordinator Ickes and Deputy Coordinator Davies and their staff for a conference in Washington. Back row: C. F. Smith, E. B. Swanson, W. L. Stewart, Dr. J. W. Frey, E. E. Pyles, H. A. Gilbert, C. S. Jones, R. E. Allen, P. G. Blazer, J. H. Marshall, E. G. Seubert, W. W. Gary, G. W. Holland, H. A. Yocom and W. S. Arnold. Middle row: J. S. Russell, J. W. Newton, B. L. Majewski, J. W. Carnes, Henry Moyle, Otto Donnell, R. S. Shannon, R. B. Jones, W. S. Hallanan, C. S. Beesemyer, W. A. Jones and B. W. Musser. Front row: H. C. Wiess, W. H. Ferguson, Frank Phillips, R. K. Davies, Secretary Ickes, A. L. Weil, C. F. Roeser and J. A. Brown

ment of oil prices now would seem, students of petroleum economics point out, more essential than at any previous time in the modern history of the industry.

The petroleum industry may face the task of maintaining production at current rates, which are near the all-time peak, without the normal balance of increased drilling. Under such circumstances, greater reliance than ever must be placed on uninterrupted production from settled and stripper areas. Without the economic cushion of low-cost flush production, the industry must of necessity go more extensively into secondary recovery operations which mean higher costs. The necessity for higher product prices to support increased producing costs is obvious.

In studies covering costs in the petroleum industry it is necessary to keep in mind that the production of crude oil and most of the other operations of the industry are now at peak levels due in part to defense and war requirements. The establishment of prices below costs will bring curtailments which will immediately affect civilian and military use.

Oklahoma Investigation Shows Need of 25-Cent Advance

AN immediate advance of 25 cents per barrel in posted prices for Mid-Continent crude oils is necessary to offset increased operating costs, according to an investigation conducted by the Oklahoma Stripper Well Association.

The report on which the recommendations was based states in part:

"A recent survey of the operators in this state indicates that the lifting cost in eastern Osage, Washington, Tulsa, Creek, and Okmulgee counties is 71.15 cents per barrel and that the lifting cost of operators having properties scattered throughout the state in both deep and shallow areas is 63.7 cents per barrel. These averages have been computed on actual pumping costs, plus supervision and office overhead but before any reduction was made for taxes, depletion, depreciation, or exploration costs. The last four deductions are variable items which may increase cost figures anywhere from 25 cents to $1 per barrel; but when applied to a large number of leases over a long period of time still pretty well establish a fixed operating cost of $1.15 per barrel. Thus it is evident that all additional drilling must be paid for out of new capital instead of from current oil runs.

"This survey further showed that there were many properties in Oklahoma which are being operated at a loss in order to keep the leases alive for the purpose of protecting the large reserves under them. This cannot go on indefinitely for the law of economics will compel the abandonment of such leases."

Early Settlement Expected In Elkins Pipe-Line Cases

By HENRY D. RALPH

Consent decree will not affect rates directly, or ownership, and will not require divorcement of ownership by major companies. Its principal feature will limit dividends to 7 per cent of valuation in any one year, the balance being impounded and held by pipe lines.

WASHINGTON, D. C., Aug. 18.—An early settlement appears likely in the controversy between the Department of Justice and pipe-line companies over charges that payment of dividends on stock owned by companies which use the lines constitutes a rate rebate under the Elkins Transportation Act.

Final details are now being completed on a consent decree which will apply to all interstate, common carrier, crude-oil and gasoline pipe lines in the United States. The decree will not affect rates directly, or ownership, and will not require divorcement of ownership by major companies. Its principal feature will limit dividends to user-stockholders to 7 per cent of valuation in any one year, the balance of earnings being impounded and held by the pipe lines.

Settlement of this case does not affect the so-called "Mother Hubbard" suit pending in the District of Columbia against the American Petroleum Institute and 22 major oil companies. Both suits were filed simultaneously, and for several months negotiations have been in progress to settle them both at the same time. The cases were separated because the oil companies declared there was a need for immediate clarification of their status under the Elkins Act before they could proceed with the construction and operation of new pipe lines for national defense.

Unless there is some last-minute hitch in the plans, the Department of Justice within a few days will file in the District of Columbia an overall suit under the Elkins Act against all interstate common-carrier pipe lines. Simultaneously the companies will file an answer and the department will file a decree, acceptable to the defendants, to be signed in court as soon as the suit is docketed. The department will then withdraw the three test Elkins Act cases now pending against the Phillips, Great Lakes, and Standard of Indiana pipe lines.

Majority Have Agreed to Plan

Defendants in the suit will be 19 major oil companies and approximately 80 pipe-line corporations and secondary companies of majors which own stock in the pipe lines. In order to dispose of the matter in a single omnibus case it was necessary to get the unanimous consent of all the pipe lines and their owners, first to accepting venue in the District of Columbia (where none of them operate or maintain offices), and second to the terms of the decree.

As of today all but two or three of the proposed defendants have agreed to the plan. If these do not acceed within a few days the department probably will file its over-all suit against the remainder and accept a decree from them, and then file individual suits against the "holdouts" in other jurisdictions.

According to information available here, the proposed decree in its present form will not affect rates, earnings, ownership nor operation of any pipe line. Its principal effect is to limit dividends paid to stockholders who are also users of the lines. There is no limit on dividends to nonuser stockholders, in case a corporation wants to differentiate among its classes of stockholders.

Dividends to user-owners could never exceed 7 per cent per year, and the percentage is not based on the amount invested nor on the book or market value of the stock but on the valuation of the common-carrier pipe-line properties as determined by the Interstate Commerce Commission, plus additions and betterments and minus depreciation. Where no final or current valuation has been fixed by the commission, I.C.C. methods would be used to determine the value for dividend purposes. In many cases the current valuation of a pipe line may be considerably greater or less than the original investment by the stockholders.

Intrastate Lines Not Affected

The decree will apply to all interstate common-carrier crude-oil and gasoline pipe lines, whether owned by individuals, a single major company, jointly by a group of companies, or as a department of a major company and not incorporated separately. It will not touch California or other wholely intrastate pipe lines, and there is a possibility that some interstate lines may be able to find a legal loophole to evade the decree by becoming private carriers instead of common carriers.

Any net earnings beyond 7 per cent on valuation are to be impounded by the pipe-line companies, and there is no provision for recapture of this fund by the Government. If earnings are not sufficient to pay the 7 per cent in any one year, a portion of the impounded surplus accumulated during the preceding 3 years (but not further back than that) may be used to bring dividend payments up to 7 per cent on valuation that year. However, extra earnings in a good year may not be used to make up unearned and unpaid dividends of preceding poor years.

The impounded surplus may be tapped to pay operating costs in a year of low income. It may also be used for maintenance, extension, additions, and betterments to the common-carrier property, but additions so financed will not be allowed to go into the valuation base for dividend purposes.

Impounded funds not used as permitted by the decree are to accumulate indefinitely, and there is no provision for their disposition except on liquidation of the pipe-line company. On liquidation, the fund is to be distributed to the stockholders of the corporations which own the pipe-line company, not to the stockholders of the pipe-line company itself. There is no provision for a case in which stock in a pipe-line company is owned directly by an individual rather than by another corporation.

Settlement Considered Reasonable

Government officials believe that this settlement of the Elkins Act "rebate" controversy is very fair to the pipe lines and will permit them to continue in business on their present basis. The decree as drafted comes far short of some of the demands made by certain politicians and independent marketing interests, since it does not provide for the divorcement of pipe lines from oil-company ownership, does not prevent owning companies from using the lines as they please, and does not affect rates or minimum tenders. Apparently the decree will not prevent expansion of pipe-line facilities nor their maintenance, and will not impair their physical value over a period of years. Neither is there anything in the decree, so far as can be learned, imposing heavy fines or penalties on the pipe-line companies for alleged past violations of the Elkins Act by giving "rebates" to user-owners in the form of dividends on stock. It had been estimated that the courts could theoretically fine the pipe-line companies a total of more than a billion dollars under the Elkins Act. This formula also appears to be much simpler and more workable than several proposals under discussion during the early stages of the negotiations.

With the Elkins Act cases out of the way, presumably permanently, it is expected that negotiations will start over again for settlement of the "Mother Hubbard" A.P.I. case. The date for filing answers in this case has been postponed many times and is now set for October 6. Department officials believe that the defendants will not go to trial on this case and they probably will consent to additional extensions of time as long as negotiations for a settlement by decree are continued in good faith.

To a certain extent disposal of the Elkins Act cases improves the bargaining position of the defendants in the A.P.I. case, because some of the defendants have felt that the department was using the threat of heavy penalties in the Elkins Act cases as a club to force important concessions in the A.P.I. case. The decree in the proposed overall Elkins Act case in the District of Columbia will include a paragraph stating that it does not affect the application of the antitrust laws to pipe-line ownership and operation. This would leave a legal way open for the department to seek divorcement of marketing and transportation under the Sherman Act if it so desired.

Shortage of Alloy Elements Big Factor in Priorities

By W. L. NELSON

In this article, the Journal's technical editor discusses the available supplies of basic alloys which are needed in the production of a large part of the oil industry's materials and equipment. The supplies of these elements have become of increasing importance because of their wide use in other industries, particularly those now engaged in the manufacture of military materials for this country and the Allies.

The alloy elements used in the oil industry are much the same required in most other industries. The principal elements are manganese, nickel, chromium and molybdenum. All except molybdenum are largely imported

THE VAST national defense effort is rapidly resulting in a shortage of many materials particularly metals and alloys. Some authorities attribute this situation, in part, to purchases by industry of large stocks of material in anticipation of future shortages, but whether this be true or not, is of no great significance because all industry contributes to some extent to defense or at least to our national welfare. Thus, in some degree all metals and alloys are strategically important and only in rare situations will it be possible to dispense completely with peace-time practices. As an example, oil has been classified as a strategically important material and yet the repercussions of an attempt to prohibit the use of motor fuel for all purposes except military motor vehicles and aircraft would be disastrous to our national economy and our effort at defense.

The alloy elements that are used in the petroleum industry are not generally different from those required in most other industries. The main elements are manganese, nickel, chromium, and molybdenum. Of these all except molybdenum are to a large extent imported materials and are, therefore, of direct strategic importance. Smaller amounts of cobalt, tungsten, vanadium, titanium and columbium are used but these can be obtained with relative ease from friendly or readily accessible sources, or from domestic ores.

Manganese Indispensable

Manganese.—Low-percentage manganese steels (1 to 2.5 per cent Mn) are used in the oil industry for such services as the following: Cast sheaves for traveling blocks, drill collars, tool joints, drill pipe, casing, couplings, tool dressing rams, casinghead bodies, and in facing materials for bit bodies. Under more severe service conditions Hadfield's manganese austenitic steel (12-14 per cent Mn) is used. Such services are, rotary gears, clutch plates for engines, sheaves of traveling or crown blocks; and in drilling hoists, catheads, brake bands, sprockets, and drive bushings. The signal importance, however, of manganese lies in requirements for small amounts in the manufacture of all steels or iron-containing alloys. It is estimated that 13-14 lb. of manganese is required for the manufacture of each ton of steel. Manganese is used to counteract the deleterious effect of sulfur (impurity) in ferrous products and to remove other impurities in the steel. Thus, all steels contain manganese to the extent of about 0.4-0.8 per cent. Such amounts of manganese do not warrant calling such steels manganese or alloy steels. No substitutes for manganese as a deoxidizer or as an agent for alleviating the effect of sulfur have been developed during the many years of the steel industry.

Coupled with this indispensability, is the fact that the United States has been forced to import over 0.9 of its consumption of manganese. The U. S. S. R. and the African Gold Coast each have supplied one-third of the imports, with Cuba, India and Brazil following in order. At the present time the situation is not acute because stock piles of manganese ore have been accumulated which will care for 2 years of peace-time consumption even though shipments completely cease. Stocks of manganese ore (35 per cent metal content and over) in bonded warehouses and other data are given in Table 1.

TABLE 1—MANGANESE ORE STATISTICS

Long tons of manganese ore (35 or more per cent Mn)

Year—	Imports for consumption	Indicated consumption	Stocks in bonded warehouses
1925-29 (avg.)	600,000	659,000	304,000
1935	383,500	413,286	418,302
1936	813,362	848,491	366,381
1937	911,919	954,503	681,290
1938	483,586	509,930	842,048
1939	627,131	656,438	903,561
1940	1,282,079	1,322,202	913,016

Imports of high-grade manganese ore in 1940 exceeded 1,250,000 tons and it is expected that the 1941 consumption will exceed 1,000,000 tons.

In the extreme, the United States would find it necessary to depend upon its domestic production and imports from Cuba at a distance of 90 miles by sea. Many experts feel that manganese is the number 1 strategic element.

Nickel.—Probably second in importance to the

(Continued on Page 38)

Stiffer Gasoline Rationing To Follow 10 Per Cent Cut

By J. P. O'DONNELL

NEW YORK, Aug. 19.—The OPACS at the request of Petroleum Coordinator Ickes has added to the general confusion with regard to rationing of gasoline in the Atlantic seaboard by the new order, announced Friday, whereby motor-fuel deliveries to East Coast suppliers are to be cut to 10 per cent below the July deliveries.

The order was admittedly an interim measure, to be followed by a more drastic allocation plan in the near future.

August usually is the peak month in gasoline usage, but the month already is half gone and a seasonal reduction in demand from now on of as much as 10 per cent below July is possible without any artificial restrictive measures unless weather conditions continue abnormally favorable to motoring.

Furthermore, the order is regarded in some trade circles as merely giving official cognizance to conditions already existing in the Atlantic seaboard markets. Large suppliers have of necessity been prorating sales to dealers for the past month to 6 weeks, in view of the loss of tanker tonnage with which to carry peak gasoline loads. This has not affected retail sales because many dealers had been supplying the deficiency from stocks.

This new ukase from Washington is interpreted as referring to deliveries of gasoline from both Gulf Coast and Atlantic seaboard refineries to (1) the East Coast sales departments of the integrated oil companies, and (2) independent jobbers and dealers in motor fuel. Retail-station operators, receiving less gasoline from their usual supply sources, will be forced, perhaps, by this new measure, to curtail sales to customers if the latter wish to continue to purchase at the peak July rate. However, their needs should decline with the vacationing season coming to a close and cooler weather, on the average, in prospect.

It is conceivable that some service-station operators in the East Coast district will find themselves short of motor fuel from time to time, despite any planning they may do in order to equalize sales and prevent at all times the emptying of their tankage.

Difficulty of Application

Most service stations, it is pointed out, cater to any motorist who may stop for gasoline, and do not have a restricted clientele whose future needs they can estimate with any degree of accuracy. A motorist may stop at a service station for gas on the east side of a city one day, and fill his tank at a station on the west side of town the following day. The station operator has no way of knowing how much motor fuel he can sell from day to day, and certainly does dot desire to establish a restricted customer list unless it should become absolutely necessary.

The 12-hour daily closing plan was much more cheerfully received by the marketing trade here than this new curtailment proposal. Not that the marketers do not desire to cooperate. But they would prefer a definite card-rationing plan than such an indefinite or generalized plan as that which has now been announced.

Following are the principal features of the rationing program as announced by the OPACS:

1340.1 *Allocation of motor fuel.*—No supplier of motor fuel shall, directly or indirectly, deliver or cause to be delivered in any month to resellers and consumers of such motor fuel more than 90 per cent of the amount delivered by him to resellers and consumers during the month of July 1941; provided that during the remainder of the month of August 1941 subsequent to the effective date of this program no such supplier shall so deliver or cause to be so delivered more than 45 per cent of the amount of motor fuel delivered by him during the month of July 1941.

1340.2 *Methods of distribution.*—Subject to the provisions of 1340.3, no supplier in making deliveries of motor fuel shall discriminate between resellers (including service stations owned or controlled, directly or indirectly, by him) or consumers supplied by him, and every supplier shall curtail deliveries to all resellers and consumers supplied by him on a proportionate basis. Subject to the provisions of 1340.3, no person maintaining or operating any service station shall, in making deliveries of motor fuel, discriminate or permit others to discriminate between different consumers of motor fuel or different classes of trade, and every such person shall so make deliveries as to spread necessary curtailment of motor fuel proportionately among different consumers and different classes of trade. All suppliers shall make deliveries in such manner as to distribute such deliveries proportionately throughout each month; and all persons maintaining or operating service stations shall make deliveries in such manner as to distribute such deliveries proportionately throughout each day.

1340.3 *Preference for certain uses.*—In making deliveries of motor fuel all suppliers and persons maintaining or operating service stations shall give preference to deliveries of motor fuel to be used, not in excess of the minimum necessary requirements, for the following purposes:

1. The operation of commercial vehicles so classified by law.

2. The operation of vehicles necessary for the public health or safety, including ambulances and vehicles operated by physicians.

3. The operation of farm machinery and motor trucks used for farm purposes.

4. The operation of vehicles owned or operated by federal, state, or local governments.

In making deliveries of motor fuel, all suppliers and persons maintaining or operating service stations shall give preference to all other uses of such fuel over deliveries to be used in the operation of pleasure boats.

1340.4 *Reports.*—Each supplier of motor fuel shall keep for inspection for a period of not less than 1 year complete and accurate records of all deliveries of motor fuel, showing the date thereof, the name and address of the consignee, the price received, the use for which such motor fuel was delivered, and the quantity of each type of motor fuel delivered.

1340.5 *Application to Atlantic Coast area.*—This program shall be applicable to deliveries of motor fuel in Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida east of the Apalachicola River, and in the District of Columbia.

Davies Issues Recommendation

WASHINGTON, D. C., Aug. 19.—Deputy Coordinator Davies Monday issued a formal recommendation to gasoline suppliers to enable them to guide filling stations in passing on to consumers the 10 per cent reduction ordered by OPACS. It is based on recommendations by District 1 marketing committee which will meet immediately to draw up necessary estimates and percentages to guide filling stations. Text of the recommendation is:

1. All suppliers shall loan, exchange, purchase or sell sufficient quantities of motor fuel to equalize as between themselves, the percentage of curtailment which each is required to impose upon different classes of trade, including other suppliers, service stations and consumers. The equalization, however, is to be such that the sum total of all motor fuel permitted conforms to the aforesaid civilian allocation program.

2. For the purpose of accomplishing such equalization, the district marketing committee of District 1 shall estimate the percentage of the available supply necessary to fill the requirements of preferred deliveries as defined in Section 1340.3 of the aforesaid civilian allocation program, in order to ascertain uniform percentages of curtailment necessary in particular areas for all nonpreferred deliveries to and by service stations and to consumers by suppliers.

3. The uniform percentages of curtailment thus ascertained shall be adopted by all suppliers in making nonpreferred deliveries to service stations and consumers, and differences, if any, between the sum total of any particular supplier's preferred and nonpreferred deliveries above or below the curtailment in deliveries required of each supplier by Section 1340.1 of the aforesaid civilian allocation program, shall be adjusted as provided in Section 1 of this recommendation and Section 1340.6 of the aforementioned civilian allocation program.

4. Appropriate meeting of any suppliers operating in the Atlantic Coast area shall be held from time to time for the purpose of working out the physical and contractual details and arrangements necessary to carry into effect the foregoing recommendations.

Commenting on the order, Mr. Davies said:

"The recommendation will permit suppliers to equalize the curtailment each is required to impose upon different classes of trade.

"Such loans, exchanges, purchases and sales should be made . . . in order that each class of trade, including other suppliers, service stations, and consumers receive as nearly as possible a proportionate share of the total supply permitted to be made available.

"Action will be prompt in passing on to filling stations the details of how they can most equitably carry out the reduction of supply with the least disarrangement possible. There is no need for confusion. As guiding determinations are made by the industry and this office, I am sure that the man at the pump will find he is able to carry out his part without difficulty or friction with his customer."

STATE CAPITALS...

CALIFORNIA

THE CALIFORNIA CONSERVATION COMMITTEE will be faced with the necessity of reducing state production of crude oil in the near future and this brings up the probability that the state's allotment will be severely reduced at the coming meeting. The allotment will be set for the month of September this week and it is almost a certainty that it will be substantially cut. The only question is how much of a cut will be made in establishing the September allowable. The August allowable had already been set before it became obvious that exports to Japan would be eliminated entirely so there was nothing that could be done. It begins to look like a long hard winter from a consumption standpoint especially if the tankers of California marketers continue to be diverted. With the Japanese market gone and prospects good for loss of the Vancouver, B. C., the outlook is not at all good. If to this is added a reduction in domestic consumption due to diversion of tankers the outlook becomes very gloomy. The tragic climax is that this situation has arisen when under ordinary conditions a good market would be expected.

MICHIGAN

A PUBLIC HEARING on proration orders in the Reed City and Roscommon oil-producing areas has been scheduled at Lansing, August 25 by the state Oil Advisory Board. F. R. Frye, director, said particular attention is being given the Reed City field where 30 or more producers are anticipated by September 1. There is a possibility that the present 480-bbl.-a-day withdrawal limit may be reduced.

The advisory board also has recommended to the state Conservation Department that tests be made of the various types of Michigan crudes for comparison with that of other states. Mr. Frye said there have been reports of discrimination against Michigan crude on the part of some refineries.

TEXAS

THE STATE-WIDE OIL PRORATION hearing held in Austin on Monday by the Texas Railroad Commission saw only very little of the action that had been forecast several days ago. With the collapse of the projected "Oil for Britain" ceremonies, the meeting consisted mainly of hearing requests for higher allowables in some North Texas fields and in the Panhandle. The session lasted only some 20 minutes, one of the shortest on record, with the question of oil for Britain being completely ignored. Nominations of oil-purchasing companies totaled 1,817,790 bbl. daily for September, or a decrease of 22,041 bbl. from the August nominations.

The Railroad Commission announced that Texas operators had donated 11,332 bbl. of oil to Britain through producing their wells on Sunday. Question of whether the oil could leave Texas until its legality is established is yet to be acted upon; the Federal Tender Board at Kilgore refused to issue permits for production from the East Texas field. Reporting the total contribution without comment, the commission also declared 7,239 bbl. which had been offered by producers was refused transportation by pipe-line companies. General opinion of producers failing to cooperate in the movement was that the special order issued by the commission, lifting the shutdown of wells producing oil for Britain, was without legal authority. Two members of the Tender Board, in refusing application for tender to move 828 bbl., ruled that the commission's special order was "discriminatory and therefore invalid."

EFFORTS OF CRUDE-OIL PURCHASERS to establish uniform practices in computation of volume will take a long forward step September 1 when a new order of the Texas Railroad Commission becomes effective. The new Texas order provides for volume corrections for temperature on the basis of the abridged supplement to the National Bureau of Standards Circular C 410. The previous commission order issued November 24, 1934, provided for computation of volume on a basis of allowing or deducting 1 per cent for every 25° in temperature.

The new order does not specify the method for taking temperature readings and, therefore, it is assumed that individual company policies will prevail in this detail. Some companies take opening and closing temperatures while others take only the opening reading.

The new Texas order follows:

"All oil tendered to a pipe line for transportation shall be gaged and tested by a representative of the pipe line prior to its receipt from the shipper; and the shipper shall at all times have the privilege of being present or represented at the gaging and testing. Quantities shall be computed from correctly compiled tank tables showing 100 per cent of the full capacity of the tanks in all oil fields of Texas; and corrections will be made for temperature to the basis of 60° F. in accordance with the Abridged Volume Correction Table for Petroleum Oils contained in the Supplement to the National Bureau of Standards Circular C 410 issued April 20, 1937. Pipe lines may deduct the full per cent of basic sediment, water and other impurities as shown by the centrifugal or other tests agreed upon. A further deduction of 1 per cent for evaporation and loss during transportation shall be made, and the net balance shall be the quantity deliverable by the pipe line. In allowing the deduction set out in this rule, it is not the intention of the commission to affect any tax or royalty obligations imposed by the laws of Texas on any producer or shipper of oil."

KEYSTONE STATE COMPACTER...

PARKER L. MELVIN, a partner in the Matson, Towne and Melvin Oil Co. of southeastern Kansas, and president of the Towne-Melvin Oil Co., Bradford, Pa., has been named as the Pennsylvania representative on the Interstate Oil Compact Commission, by Gov. Arthur H. James. Mr. Melvin is also head of the Pennsylvania Grade Oil Association

LOUISIANA

THE DEPARTMENT OF MINERALS, which was created by a reorganization amendment, has formally passed out of existence when the Mineral Board elected officers and planned policies in accordance with the Supreme Court's decision invalidating the amendment. The Mineral Board resumes the status of a branch of the Conservation Department and relinquishes the broad authority the amendment gave the Board of Minerals. Gov. Sam H. Jones is ex-officio chairman of the board and B. A. Hardey of Shreveport was elected active chairman with James W. Smither of New Orleans as vice chairman.

Chairman Hardey announced administration of all regulatory laws affecting minerals now would be vested in Conservation Commissioner W. H. Hodges. The Mineral Board will have only the duty of administering state mineral properties, with Commissioner Hodges presiding over proration hearings and issuing orders. John L. Conner has been named secretary of the board, succeeding Dudley Couvillon, and Stanley M. McDonald has been employed as geologist to succeed William A. Romans.

KANSAS

THE STATE-WIDE MARKET DEMAND hearing called by the Kansas Corporation Commission for August 21 at Wichita, for the purpose of hearing testimony on which to base the September proration order, will also see action on three other proposals. These include application of Cities Service Oil Co. for a plan of development for the Wilkins pool of Ellsworth County; application of Alpine Oil & Royalty Co. for a plan of development of Section 5 and W½ of Section 4 in 17s-13w, Barton County; and determination of natural-gas allowables in the Otis pool of Rush and Barton counties, from the Lyons field of Rice County, and the Cunningham pool of Kingman and Pratt counties.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Where Authority Rests

"Where do the Interstate Oil Compact Commission and conservation departments of the oil states stand in this new Washington setup?" asks an independent producer.

This operator, along with many others who have made similar queries, is impressed with the consistent progress in conservation practices brought about by states and the compact and he is fearful that "operators may wake up shortly and find themselves going to Washington or some federal district office instead of the state capitals to transact their business."

With many details still unannounced it now appears that the petroleum coordinator plans a dual organization providing for governmental staffs at Washington and five district offices and also committees from the industry which will serve as an advisory group.

It has been pointed out frequently that the state conservation units as such have not been recognized in any of the coordinator's appointments. There is no reason why they should be.

Control of the industry's producing operations remains with the oil states. This is recognized in the federal approval of the compact which was established 6 years ago to support the application of state laws which have been sustained by the highest courts.

The coordination plan at Washington was not brought about through any action of the oil states or the industry but was entirely due to war and defense emergencies. Removal of tankers from coastwise to British service, which could not have been anticipated by the industry, has created major operating difficulties. The matter of adequate supplies to maintain present oil operations is another allied problem.

Defense powers and those created or assumed under the Lend-Lease Act are being used in the handling of these matters. The oil states and operators have the right and duty to present their positions and those of their customers to these defense commissions.

The remaining powers of control, to a large extent, continue with the oil-regulatory bodies that have been established in the several oil states.

It has been indicated that one of the first duties of the producing division of the coordinator's office will be to make recommendations as to how materials and equipment can be conserved through conservation practices. This involves well spacing, unit operation, secondary recovery, and other operating practices.

Authority in these matters rests with those who administer the state conservation laws. They have many accomplishments to point to and present conditions are much more satisfactory than outsiders have been led to believe.

As one competent investigator has pointed out, "there are a lot of things known about well spacing that are not true." It is no place for general rules promulgated away from the oil country. The state conservation bodies not only have the legal authority but being closer to the problem they are in a better position than anyone else to perfect regulations which will fit the widely varying operating conditions.

In regard to unit operation, the greatest danger lies in fostering monopolistic practices with which another department at Washington and many legislators have been concerned in recent years. Here again the states are familiar with the needs of operators and cooperating with producers, have the powers to work out and enforce practices that are fair.

Getting back to the original question, the answer is that the conservation bodies of the oil states stand exactly where they stood 6 months or a year ago and if operators are alert to the best interests of everyone concerned there will be no change.

Standard (N.J.) to Increase Crude Tank-Car Hauls

CARRYING more than 6,000 bbl. of East Texas crude oil, 25 tank cars rumbled into Bayway, N. J., refinery on July 10, according to an article which will be published in the next issue of the Lamp, official publication of the Standard Oil Co. (New Jersey). It was the first such movement in 20 years. By July 18 daily shipment had expanded to 10,000 bbl. and now 16,000 bbl. is arriving every 24 hours. In less than 1 month, Bayway's rail-borne crude-oil supplies have more than doubled and, if present plans work out, the flow will be increased again by late fall to 30,000 bbl. daily.

To handle this stream of oil the refinery is spending approximately $100,000 to build additional loading racks. Scheduled for completion by the middle of August, the new facilities will be able to unload 200 tank cars a day if necessary.

That first rail shipment of crude oil originated in East Texas. Through the Humble, Standard, Oklahoma, and Ajax pipe-line systems, which are operated by affiliated or subsidiary companies, it traveled northeastward to Wood River, Ill. There it was picked up by the Illinois and Buckeye lines, carried to Lima, Ohio, and loaded into 25 tank cars that stood waiting on a siding of the Nickel Plate Railway.

At 2 a.m. July 8 a fast east-bound freight picked up the loaded tank cars. At Buffalo, N. Y., they were transferred to the Lackawanna Railroad, and at Taylor, Pa., the cars were switched to the Jersey Central tracks for the haul to Elizabethport, N. J. At 6:10 a.m. July 10 they rolled into the unloading racks at Bayway. The shipment covered 772 miles in the total elapsed time of 52 hours and by evening the empty cars were heading west for another load.

Use Alternate Routes

Some 200 tank cars were assigned to this initial schedule, which called for one delivery every day in the week. The movement alternated on two routes, that described above and another which followed the Nickel Plate to Buffalo, the Lehigh Valley to Wilkes-Barre, and the Jersey Central to Elizabethport. All these original shipments of 6,000 bbl. daily started from Lima, Ohio.

Of the 16,000 bbl. of crude currently being shipped by rail to Bayway, only about 2,000 bbl. is coming from Lima, due to sudden congestion of pipe-line facilities to that point. Some 10,000 bbl. is being moved by other nonaffiliated lines to Martinsville, Ill., then railed east via La Porte, Ind., Columbus, Ohio, Pittsburgh, Altoona, Philadelphia, and Newark, Pa. This tank-car movement covers about 950 miles and is considerably longer than from Lima east.

Owensboro, Ky., has lately become another pipe-line-tank-car junction, transporting 4,000 bbl. a day of crude oil from the western Kentucky fields. When the 30,000-bbl. daily shipments to Bayway begin in the late fall, Lima, Martinsville, and Owensboro will be the railheads through which the flow of crude from Texas, Louisiana, Arkansas, Illinois, and Kentucky will move east.

A tank car loading crude at Lima, moving to Bayway, unloading there and returning to Lima, can make about four round trips a month. About three round trips per month are possible in the Martinsville - Bayway and Owensboro - Bayway movements. To move 30,000 bbl. a day, it will be necessary to have 1,300 tank cars continuously assigned to this service. They would have to be drawn from the 19,000 so-called surplus units which under normal conditions would constitute a working reserve for the industry's peak movements of refined products.

Tank-car shipments of crude oil to eastern refineries are bound to increase refined products costs. In normal times, transportation rates for bringing East Texas crude to Bayway might have been around 39 cents a barrel. This compares with the 67.5 cents a barrel tariff now in effect on trunk pipe-line movements of Texas, Louisiana, and Arkansas crudes to Bayway.

When the crude is piped as far as Lima, Ohio, the pipe-line cost from Texas to that point is 45 cents a barrel. The rail rate now in effect between Lima and Bayway is 55 cents, so that the total overhead cost from Texas to Bayway is $1 a barrel. To this must be added a few cents for loading and unloading tank cars.

If the oil is piped to Martinsville, Ill., the cost is 37.5 cents a barrel. A rail rate of 65 cents a barrel from Martinsville to Bayway has been authorized by the Interstate Commerce Commission, making a combined cost for the Martinsville-Bayway haul $1.025 a barrel.

If tank-car movements prove too costly to permit eastern refineries to supply products at reasonable prices, study might be given to the use of additional pipe-line capacity for the movement of Texas or Oklahoma crudes to Lima, Chicago, or St. Louis for rail shipment to the East.

While Jersey's rail shipments of crude to Bayway have been of paramount interest, a comparable quantity of crude has been arriving at the refinery through existing pipe lines whose capacities are being fully utilized. Over the next several months the company plans to ship daily 20,000 bbl. of East Texas, North Louisiana, and southern Arkansas oil through affiliated pipe-line systems to Wood River, Ill., by the Illinois and Buckeye lines to Lima, thence to Bayway through nonaffiliated lines. This 20,000 bbl. a day is substantially less than the amount which used to arrive in the ocean oil carriers that have been transferred to British use, but when added to the 30,000 bbl. a day soon to be arriving by tank car, they will supply about 50 per cent of the refinery's requirements. The remainder, it is hoped, will continue to come in by tanker.

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Pennsylvania Grade Crudes Advanced to 11-Year High

The 23 to 25-cent advance in Pennsylvania Grade crude-oil prices posted by purchasers on August 14 sent prices for these crudes to their highest levels since February 1930. With Bradford and Allegany crudes currently being posted at $2.98, or at least 16 cents higher than at any time since they sold for $3.05 early in 1930, last week's advance was the fifth such general advance so far this year. As a result of these increases Pennsylvania producers are receiving about 83 cents more for their crude than at the first of the year.

The new advance was instituted by the Joseph Seep Purchasing Agency of South Penn Oil Co., with other purchasers falling in line. The new prices are Bradford and Allegany, up 23 cents to $2.98; South West Pipe Lines, up 25 cents to $2.65; Eureka, up 25 cents to $2.59; Buckeye, up 25 cents to $2.55; Corning, unchanged at $1.31.

Pennsylvania refined oil prices, with minor exceptions, as yet have not been affected by the crude advance, however, it is expected that the higher crude prices will offer a strong argument for increased product prices. The OPACS has asked Pennsylvania refiners to freeze 200-viscosity, 25-pour test neutral at 33 cents, with the then prevailing differential for other grades. Therefore, in some circles the higher crude prices are interpreted as a move tending to support or validate recent high prices for Pennsylvania lubricating oil above the level approved by the OPACS.

Emergency Rail Rates Established for Crude Movement to East Coast

One of the week's outstanding developments for refiners in the Southwest was publication of emergency freight rates for movement of petroleum from Texas to the East Coast. Southwestern lines have authorized publication of a rate of 44 cents per barrel from Kinsloe, Tex., near Kilgore, to Philadelphia and Marcus Hook, Pa. This rate compares to a charge of 12 cents per barrel from East Texas to the Gulf Coast via pipe lines and 50 to 55 cents from Houston, Tex., to ports north of Cape Hatteras via tankers.

These new rates are 13 per cent of first class and are said to comprise a sharp reduction for existing rates as a contribution to meeting the shortage of tankers for Gulf Coast-Atlantic Coast service. The railroads in establishing the new rates will apply them to crude petroleum in its natural state, with a minimum weight of 60,000 lb. per car.

THE MARKETS*

CRUDE OIL: Pennsylvania Grade crude oils for the fifth time this year were advanced last week, the latest advancement being one of 23 and 25 cents, to place these crudes at their highest levels in over 11 years. In the Middle West oil states the demand for crude remained vigorous, with the payment of premiums for connections reportedly increasing.

REFINED PRODUCTS: With the exception of the Pacific Coast area, there was a general firming of prices for refined products, especially on the Gulf Coast and East Coast. In the latter area a general advance in kerosene and No. 2 fuel oil prices was posted, with the lubricant and gasoline market remaining steady. On the Gulf Coast large purchases of gasoline and kerosene by the Navy served to remove much available material. On the West Coast, transfer of tankers to hauling cargoes to Russia threatens to cause a transportation shortage.

TANK WAGON AND POSTED DEALER: Advances in tank-wagon kerosene prices in the New England area and along the Atlantic seaboard were made during the past week. At points in the Middle West, dealer and tank-wagon prices were reduced to subnormal levels following upward adjustments during the previous week.

FINANCIAL: After establishing a new high for the recent upward movement of oil securities 2 weeks ago, stocks again showed a decline. Average of 30 representative stocks for the week ended August 16: High, 26.65; low, 25.92; close, 26.14. Week ended August 9: High, 27.60; low, 26.40; close, 26.53.

*Detailed information in Market Section.

Watching WASHINGTON

By HENRY D. RALPH

Senator would displace Ickes as petroleum coordinator . . . Ickes recommends permanent continuation of "Hot Oil" Act . . . Increased need for 100-octane gasoline may result in doubling refinery capacity for this product . . . Army will adopt standard grade of fuel

WASHINGTON, D. C., Aug. 19.—Creation of an independent petroleum coordinator's office headed by a coordinator holding no other federal office for the duration of the present emergency was proposed in a bill introduced in the Senate late last week by Sen. Charles Andrews, of Florida.

Under the terms of this measure the coordinator would be authorized to issue licenses to distributors of petroleum or petroleum products as a prerequisite to the distribution for sale by retail dealers of petroleum products. He would also be empowered to "limit or otherwise control, by means of priorities, rationing, or other appropriate means or methods, the use of petroleum or petroleum products."

Mr. Andrews stressed the fact that introduction of the measure was not aimed at Mr. Ickes personally. He cited, however, the numerous other positions now occupied by the present coordinator as reasons why this job should be a full-time one, to be undertaken by a man with no other responsibilities.

"The job of petroleum coordinator today," he declared, "is of too vital importance to the nation's defense to be handled by a man who has 22 other jobs. It is not directed at Secretary Ickes, but I feel that control of the life blood of the nation in these critical times should be given to a man who can give his full and undivided attention to the problem."

Would Centralize Control

The Andrews bill would bring under the specific jurisdiction of the coordinator's office all existing branches and agencies of the Government which have any connection with the oil industry. This would include powers granted under the emergency proclamations.

"The joint resolution," Mr. Andrews told the Senate, "is introduced in good faith. I trust the members of the Senate, and particularly the members of the committee to which it will be referred, will make a study of the measure, and that it will be favorably considered at the earliest possible time."

Considerable dissatisfaction with Mr. Ickes' actions as defense petroleum coordinator has been expressed at the Capitol recently, and it is possible that some attempt will be made to enact the bill into law. However, chances for enactment at the present session of Congress appear unlikely.

Extension of the Interstate Oil Compact Commission for another 2 years was assured when the Senate approved the resolution, previously adopted by the House, authorizing the extension. The compact now goes to the White House for the signature of the president.

Urge Extension of Connally Act

PERMANENT continuation of the Connally "Hot Oil" Act was strongly urged by Mr. Ickes in a letter to Sen. Tom Connally of Texas, author of the law. Pointing out that on two previous occasions, when extension of this law has been before Congress, the House refused to make it permanent on the grounds that the State of Texas refused to enact permanent conservation statutes, Mr. Ickes said that this excuse is no longer valid as Texas made its Conservation Act permanent in June of this year.

"A lesser objection was the belief among some people that the Connally law functioned solely in the East Texas field," Mr. Ickes' letter read in part. "The act applies to all oil-producing states having conservation laws, but the reporting system has heretofore applied only to East Texas. My order of May 26, 1941, designates additional areas in the states of Texas, New Mexico and Louisiana, from which monthly reports of operations are required from producers, transporters and storers, refiners, and others.

"The administration of the law during nearly 6 years has not indicated the need for any changes in the wording or provisions of the act which are of sufficient importance to warrant amendments other than the elimination of the date of its termination. The act has successfully withstood a number of legal attacks in the federal courts in Texas and Louisiana.

"I strongly favor the continuation of the Connally Act and I hope that during this session of the Congress you will again sponsor a bill to make the act permanently effective."

Need More Aviation Fuel

UPWARD revision in the requirements of aviation-grade gasolines for national-defense purposes and for supplying needs of Great Britain and the U.S.S.R. is expected to require the doubling of refining capacity for 100-octane gasoline as quickly as possible. With the oil industry taking the initiative, steps to be taken in accomplishing this result were discussed at conferences here last week between chairmen of industry advisory committees and officials in the office of petroleum coordinator for national defense. Certain preliminary surveys are well under way and other studies are being made to determine the probable initial requirements in cracking and other essential equipment.

Defense Petroleum Coordinator Harold L. Ickes warned that this country cannot go on building and operating planes to the number of thousands, and at the same time supply the British and Russians, and eventually the Chinese, without increasing refining capacity considerably.

"The industry, I am confident, is quite capable of doubling its 100-octane refining capacity with a minimum of delay in order that it may fully provide whatever may be required in the way of aviation gasoline."

In response to Mr. Ickes' appeal for higher output of aviation gasoline, plans for the expenditure of at least $10,000,000 for the building of new plants and additions have been announced. Standard Oil Co. of California has announced it will expend $4,500,000 for new 100-octane gasoline capacity at its El Segundo, Calif., refinery. Sinclair Refining Co., manufacturing subsidiary for Consolidated Oil Corp., is formulating plans for an alkylation-type plant at its refinery at Houston, Tex., and will start construction as soon as priorities on materials can be arranged. Humble Oil & Refining Co. is now constructing a duplicate alkylation unit at its Houston refinery. Standard of California already has started work on a Houdry process plant at El Segundo which will increase its 100-octane aviation gasoline capacity 2,300 bbl. daily, plus 2,600 bbl. of high-octane motor fuel.

Army Standardizes Fuel

TO simplify the problem of supplying oil and gasoline to Army vehicles in the field, vastly complicated by demands of motorized warfare, the War Department on Saturday announced that one standard type of gasoline will replace the four varieties formerly in use. Also, fuels for diesel-powered vehicles will now be of three varieties instead of the former four, and lubricating oils for diesel vehicles has been similarly standardized. Lubricating or crankcase oils for gasoline vehicles was cut from 10 types to 3. The announcement embodied the findings of the War Department committee on liquid fuels and lubricants, which made a study of the problem during the past several months.

The Army's standard gasoline is a high test, 80-octane fuel like premium-grade commercial gasolines. Airplanes and medium tanks which use airplane engines will continue to use aviation gasoline which meets Army-Navy Aeronautical Board specifications.

While no mechanical changes will be necessary in motor vehicles now in use, it is anticipated that the use of one standard gasoline may influence the design of future models. Administrative vehicles, those in use at Army posts, camps, and stations are exempted from this standardization move, but its advantages in storing and distributing oil and gas in the field are obvious.

California Coastwise Trade Loses Four Tankers

By L. P. STOCKMAN

LOS ANGELES, Calif., Aug. 19.—The diversion of four American tankers from Pacific Coast territory to load cargoes of gasoline and diesel for Vladivostok, Russia, came out of a clear sky and will further reduce the number of tankers available for coastwise trade. As a result of this decision, the Union Oil Co. tanker L. P. St. Clair left Los Angeles Harbor with a cargo of gasoline consigned to Amtorg Trading Co. at Vladivostok, a Siberian port in the western end of the Japan Sea. The crew receives a bonus and overtime for the trip. Two other tankers, the J. G. Fitzsimmons of Standard Oil Co. and the Associated of Tide Water Associated Oil Co., are scheduled to load and depart for the same destination within the next few days. The latter is a relatively new tanker and has a capacity of 100,000 bbl., and the J. C. Fitzsimmons, an older vessel, has a capacity of 80,000 bbl. In addition to these bulk shipments, approximately 5,000 50-gal. steel drums containing aviation gasoline left for Vladivostok on board a freighter a week or so ago.

The loading and projected loading of tankers with California petroleum for Russia was in sharp contrast with the treatment accorded two Japanese tankers. Both of the Japanese tankers, the Otowasan Maru and the Nitiei Maru, received export licenses from the Export Control Administration to load diesel at Los Angeles Harbor. The Federal Reserve Bank, however, refused to release the necessary funds with which to pay for it. The Otowasan Maru, owned by the powerful Mitsui interests, waited around for 8 days and then pulled anchor for her home port. The Nitiei Maru, owned by Asano Bussan, waited for 9 days and then deciding any further wait would prove fruitless left in ballast for Japan. Aboard her was Kaname Wakasugi, Japanese minister to the Japanese Embassy in Washington who is returning home to make a personal report. It is becoming more evident with each passing week that the periodic diversion of American tankers from the Pacific Coast will sooner or later result in an interference in the transportation of refined oil to the extent that areas removed from the refining centers will obviously be compelled to severely reduce gasoline consumption. It would be greatly surprising if more than 10 tankers remain in Pacific Coast territory within another few months.

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Measure Would Investigate Petroleum Products Shortage And Ameliorative Methods

WASHINGTON, D. C., Aug. 19.—A resolution calling for a complete investigation of the current shortages of gasoline, fuel oil and other petroleum products in the eastern states, the methods being employed for the purpose of curtailing deliveries of such products for ordinary consumer use, and the most effective means that may be employed for ensuring an adequate supply of petroleum products for national-defense purposes without undue hardship to business enterprises and consumers generally, was introduced in the Senate today by Senator Francis Maloney, of Connecticut.

Under this measure a special investigating committee, consisting of five senators, would be appointed by the vice president to inquire into the present situation and suggest possible remedies. The committee would be given the usual powers of subpena of witnesses and documentary evidence.

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DEATHS

WILLIS H. THOMAS, Bradford, Pa., oil man, and resident of that city for 46 years, died at his home there last week. He had been in failing health for some time, and his condition had been serious for a week before he died. His widow, a son and two daughters survive.

IKE ROBINSON, 51, employed by the Texas Co. for 18 years, died recently at his home in Tulsa. He had lived in Tulsa and the surrounding vicinity for 45 years. He was employed in the company's refinery, and death was attributed to a heart attack. His widow, five daughters and a son survive.

ALBERT H. WISEGERBER, 55, an executive of the Portland Pipe Line Co., died last week of injuries received from a fall suffered when he had a stroke. He was alone in his office, and presumably cut his leg, severing an artery, when he collapsed from the stroke. He bled to death. Mr. Wiseberger was at one time associated with Oklahoma Pipe Line Co., and with Ajax Pipe Line Corp.

JOSEPH H. WHITAKER, 49, vice president of the Omar Refining Co., Garber, Okla., died Sunday morning at a hotel in Garber. Mr. Whitaker's home was in Tulsa, where he is survived by his widow and a daughter. Prior to his connection with Omar, of which the deceased's brother, F. S. Whitaker, is president, he was affiliated with Pure Oil Co. He came to Tulsa in 1919.

HARLEY PARKS, superintendent of the Sun Oil Co. in West Texas, drowned Sunday while attempting to swim from a raft to the shore in the Red Bluff Dam Lake, near Odessa, Tex. Mr. Parks went to Odessa from Kilgore, Tex., 5 months ago. His widow and two daughters survive.

JIM OLES, oil-field worker, was killed last Saturday near Opelousas, La., when a boiler on a drilling rig where he was employed exploded. Mr. Oles for the past 20 years had been employed by major oil companies and drilling contractors. His widow and a son survive.

FRANCIS SEMELSBERGER, 23, of Duke Center, Pa., was killed instantly on August 9 in a drilling accident, suffered while he was working on a rig of the Forest Petroleum Co. Included among the survivors are his wife, a son and a daughter.

JOHN W. THOMPSON, 39, oil well driller of Oklahoma City, Okla., died Sunday morning during an oil-well fire near Guthrie, Okla. He was burned to death when he attempted to close a valve which controlled the flow of oil.

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Central States Purchase Completed By Oklahoma Natural Gas Co.

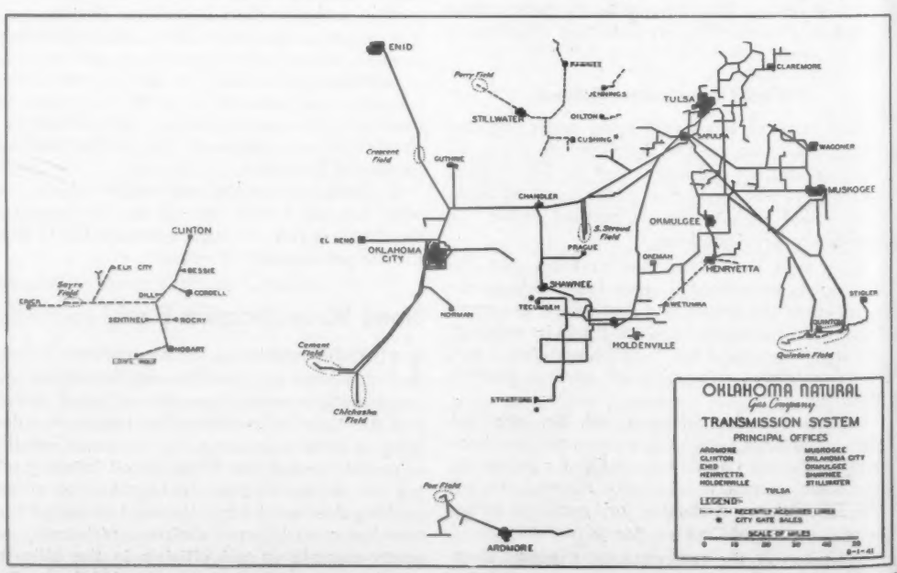
Joseph Bowes, president of the Oklahoma Natural Gas Co., Tulsa, has announced the completion of the negotiations whereby the Central States gas properties in Oklahoma were purchased by Oklahoma Natural Gas Co.

Mr. Bowes stated that negotiations for this purchase started about 2 years ago. Since that time officials of the company have been working out the details of the purchase which finally culminated in the transfer of the properties.

Cities whose gas-distribution systems are involved include Henryetta, Wetumka, Pawnee, Stillwater, Oilton, Jennings, Quinton, Stigler, Erick, Carter, Elk City, Cordell, Clinton, Sentinel, Rocky, Dill City, Bessie, Hobart, Lone Wolf, Okemah and Holdenville.

Mr. Bowes states that the acquisition of these towns by Oklahoma Natural will strengthen and round out both systems, and will give the acquired towns the future advantage of an adequate supply of gas and larger reserves, the same as communities now served by the Oklahoma Natural Gas Co.

For the most part, the personnel in the communities formerly served by the Central States Power & Light Corp. will remain unchanged.



Pipe-line systems of Oklahoma Natural Gas Co. which now include the lines operated until recently by Central States Power & Light Corp. Negotiations for the purchase started some 2 years ago

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4 Spacing band centers glass and prevents contact with metal.

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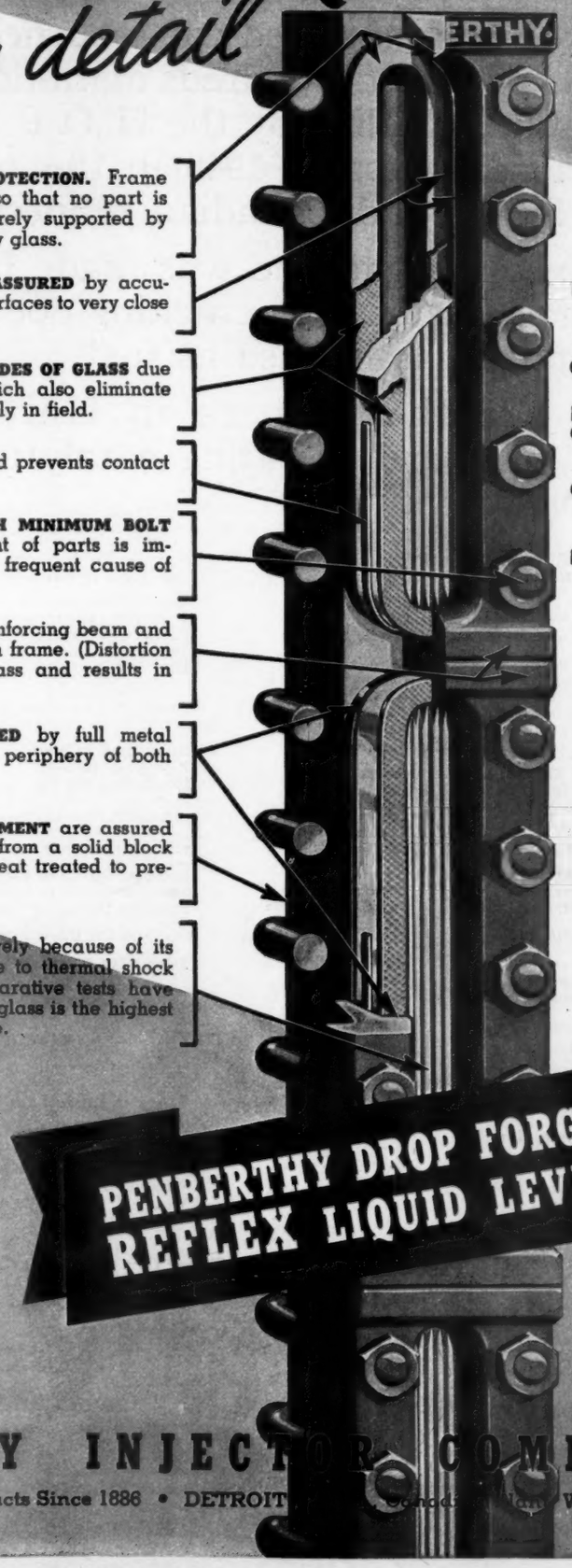

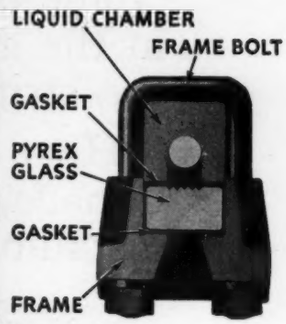

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The polymer gasoline was made from the olefins in the gas produced in cracking operations, leaving the stripped gas for use as fuel

Here are the refiners in United States and Canada who are operating catalytic poly units or installing them:

Ashland Oil & Refining Co	*Catlettsburg, Ky*
Atlantic Refining Co	*Point Breeze, Pa*
Bareco Oil Co	*Wichita, Kansas*
James B Berry Sons Company	*Oil City, Pa*
Big West Oil Co of Montana	*Kevin, Montana*
Canadian Oil Companies Ltd	*Petrolia, Canada*
Canton Refining Company	*Canton, Ohio*
Continental Refining Co	*Oil City, Pa*
Cooperative Refinery Ass'n	*Phillipsburg, Kans*
Cosden Petroleum Corp	*Big Spring, Texas*
Cushing Refining & Gasoline Co	*Cushing, Okla*
Danciger Oil & Refineries Inc	*Pampa, Texas*
Deep Rock Oil Corp	*Cushing, Okla*
Derby Oil Company	*Wichita, Kansas*
Fletcher Oil Co Inc	*Los Angeles, Calif*
Freedom Oil Company	*Freedom, Pa*
Gas & Oil Products, Ltd	*Hartell, Canada*
Glacier Production Co	*Cut Bank, Mont*
Goodrich Refining Co Ltd	*Port Credit, Canada*
Home Oil & Refining Co	*Great Falls, Montana*
Independent Refining Co	*Arp, Texas*
Independent Refining Co	*Laurel, Montana*
Inland Empire Refineries Inc	*Spokane, Wash*
Johnson Oil Refining Co	*Cleveland, Okla*
Kendall Refining Co	*Bradford, Pa*
Leonard Refineries, Inc	*Alma, Mich* *St Louis, Mich*
Louisville Refining Co	*Louisville, Kentucky*
Mid-West Refineries Inc	*Alma, Michigan* *Grandville, Mich*
Mohawk Petroleum Corp	*Bakersfield, Calif*
Naph-Sol Refining Co	*Muskegon, Mich*
Northwest Refining Co	*Cut Bank, Mont*
Ohio Oil Co	*Robinson, Ill*
Old Dutch Refining Co	*Muskegon, Michigan*
Pan American Refining Corp	*Texas City, Texas*
Panhandle Refining Co	*Wichita Falls, Texas*
Pathfinder Petroleum Co	*Los Angeles, Calif*
Pennzoil Company	*Oil City, Pa*
Pure Oil Company	*Cabin Creek, W Va*
Quaker State Oil Refining Corp	*Farmers Valley, Pa* *Emlenton, Pa* *St Marys, W Va*
Richfield Oil Corp	*Watson, Calif*
Root Petroleum Co	*Eldorado, Arkansas*
Rothschild Oil Co	*Santa Fe Springs, Calif*
Shell Oil Company	*Houston, Texas* *Norco, Louisiana*
Sinclair Refining Co Inc	*East Chicago, Indiana* *Marcus Hook, Pa*
Standard Oil Co of California	*El Segundo, Calif*
Standard Oil Co of Indiana	*Whiting, Indiana*
Standard Oil Co of Louisiana	*N Baton Rouge, La*
Standard Oil Co of New Jersey	*Bayway, New Jersey* *Everett, Mass*
Sunray Oil Company	*Allen, Oklahoma*
The Texas Company	*Casper, Wyoming* *Port Arthur, Texas* *Lawrenceville, Illinois* *Lockport, Illinois* *West Tulsa, Oklahoma* *Dallas, Texas* *Fillmore, California*
Tide Water Associated Oil Co	*Drumright, Okla*
Union Oil Co of California	*Oleum, California*
United Refining Company	*Warren, Pa*
Waggoner Refining Co Inc	*Electra, Texas*
Wilshire Oil Company Inc	*Norwalk, Calif*
Wolf's Head Oil Ref Co, Inc	*Oil City, Pa*

Is your name written there? It ought to be

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Service on Active Fields

DORCHEAT FIELD, COLUMBIA COUNTY, ARKANSAS

Compiled by The Oil and Gas Journal

GENERAL INFORMATION

Geographic location

In Township 18s, Range 22w, 10 miles southwest of the city of Magnolia.

Principal cities and towns

Magnolia, Columbia county seat and nearest incorporated city, lies 15 miles distant. El Dorado, largest city in the South Arkansas oil area, is 50 miles east, and Shreveport, La., lies 70 miles southwest, all distances by highway.

Highways and roads

The field is located between Arkansas State Highways Nos. 132 and 3, both semisurface, all-weather roads leading into Magnolia. Dorcheat Bayou, which runs through the field, makes some field roads impassable during rainy season.

Trucking and rail facilities

Oil-field and long-distance trucking companies maintain branches in Magnolia, El Dorado and Shreveport. The L.&A.-K.C.S. Railroad lies 4 miles west of the field with the nearest station at Stamps, about 15 miles northwest. The L. & N. Railroad lies east of the field, serving Magnolia.

Supply companies

Oil-supply companies maintaining stores in Magnolia and nearby points include: Continental Supply Co., El Dorado Foundry Machine & Supply Co., Inc., Mid-Continent Supply Co. and Oil Field Supply & Metal Co.

Nearby fields

Dorcheat lies 12 miles southwest of the Magnolia field, 16 miles due west of Atlanta and 8 miles southeast of McKamie.

Utilities

Arkansas Power & Light Co. furnishes electric power in the field. Field wells produce adequate gas for drilling, and fresh water is available at depths of from 300 to 500 ft.

DEVELOPMENT

Discovery

The field was discovered August 28, 1939, by Atlantic Refining Co. 1-A Pine Woods Lumber Co., NE NE 16-18-22. The wildcat was located on a geophysical prospect which indicated structure in the deep Smackover lime formation.

Spacing

The field is developed on a 40-acre spacing pattern. Since it is a combination oil and gas field, some operators have asked for wider spacing. The presence of oil production, however, prevents the Arkansas Oil and Gas Commission by law from setting drilling units larger than 40 acres.

Future development

Subsurface information and geophysics indicate that the field extends in a general east-west direction, with a slight southward dip at the east. Current drilling has been along the indicated east-west axis of the field, so north, south and east extensions are expected to be drilled. The field is defined only on the west.

Lease ownership

No operator holds a sizable block of acreage in the field as proven or indicated. In addition to the 10 operators owning producers, nine other operators hold what may be expected to prove productive leases.

Development to date

At present 15 wells are producing, one west-side dry hole has been abandoned and three drilling operations are under way. The accompanying table shows operations to date.

Company, well No., lease and location—	Status	Subsea top Smackover
Arkansas Fuel Oil Co.:		
1 Curtis Barton, NW NE 14-18-22	Drilling	
Atlantic Refining Co.:		
A-1 Pine Woods Lumber Co., NE NE 16-18-22	Producing	—8,578
A-2 Pine Woods Lumber Co., NW NE 16-18-22	Drilling	
B-1 Pine Woods Lumber Co., SE NW 16-18-22	Producing	—8,624
Delta Drilling Co.:		
1 C. W. Martel, SE SW 10-18-22	Producing	—8,575
Lion Oil Refining Co.:		
1 G. J. Dickens, NE NW 16-18-22	Producing	—8,587
1 Warnock estate, NW NW 15-18-22	Producing	—8,568
C. H. Lyons:		
1 D. Henry, NE NE 15-18-22	Producing	—8,537
McAlester Fuel Co.:		
1 B. G. Barton, NW NW 14-18-22	Producing	—8,544
1 Jeff Hunt, SW SW 11-18-22	Drilling	
1 H. Sayers unit, NE NW 15-18-22	Producing	—8,561
1 K. J. Sayers, NW NE 15-18-22	Producing	—8,535
2 K. J. Sayers, SW SE 10-18-22	Producing	—8,557
Mid-Continent Petroleum Corp.:		
1 J. Keith, SW NW 16-18-22	Dry	—8,626
C. H. Murphy:		
1 B. G. Barton, SW NW 14-18-22	Producing	—8,534
Shell Oil Co., Inc.:		
1 W. P. Keith, SE SE 9-18-22	Producing	—8,575
2 W. P. Keith, SW SE 9-18-22	Producing	—8,576
Southwood Oil Co., Inc.:		
1 J. Hunt, NE NW 14-18-22	Producing	—8,541
Superior Oil Co.:		
1 C. W. Martel, SW SW 10-18-22	Producing	—8,572

GEOLOGY

Type structure

The producing formation is an east-west anticlinal fold at a subsea depth of —8,650 ft.

Producing horizon

The Reynolds lime, a porous, oolitic member in the top of the Smackover formation, produces oil and gas. The section shows an average porosity of 13 per cent and an average permeability of 155 millidarcys. At its present development stage the structure shows a closure of about 92 ft. on the top of the Smackover lime.

The porous lime section is saturated with gas, oil and salt water. The gas-oil contact lies at —8,633 ft. subsea, and the oil-water contact at —8,655 ft. The salt-water section is continuous under the field as now developed. The maximum porous section found above the water level to date is 78 ft. of gas cap and 22 ft. of oil zone.

DRILLING PRACTICES

Type of rigs

Heavy, 8 by 8-in. steam rigs, powered by three 125-hp. boilers are used in drilling to the 8,900-ft. pay. Derricks measuring 136 ft. and 18 by 20-in. mud pumps are used. Blowout preventers are used on all drilling wells. The average well is completed within 10 to 12 weeks, from spudding date. Actual drilling averages 150 ft. per day. Rock bits are used in all drilling, requiring an average of 80 bits per well. Artificial mud is used in drilling, averaging 10-lb. weight, and 25 viscosity.

Casing program

Field orders require a minimum of 100 ft. of surface or conductor casing, 2,250 ft. of intermediate string, set in a hard chalk found at approximately that depth, and 2,000-lb.-test producing casing set below the gas-oil contact in the porous lime. Surface casing is 16 or 13⅜-in. intermediate, 9⅝-in. casing is used and most producing strings are of 5½-in. casing.

Completion methods

Due to the thin, 22-ft. oil section in the porous lime, care is required in completing low-ratio wells. Open hole and perforations are used, the latter predominating. In most cases, the producing string is set well into or through the oil section and perforations are shot near the center of the oil section. On the average, 5 ft. of section is perforated, with an average of five shots per foot.

PRODUCING PRACTICES

Reservoir characteristics

The field is a combination oil and gas-condensate pool. Due to varying completion practices and to different surface separation pressures, wells show a wide range in gas-oil ratios, and in proportions of condensate and oil in the produced liquid. Some water coning is taking place, although it is limited to about two wells. Funneling of gas from the gas cap downward into the oil section also takes place, with gas-liquid ratios ranging from 6,700 to 13,100 cu. ft. per bbl.

Field tests conducted over a 2-month period, at separator pressures ranging from 100 to 1,800 lb. per sq. in., showed greatest recovery at 1,000 lb. per sq. in.; 7 to 7.89 gal. per 1,000 cu. ft. Original reservoir pressure was 4,243 lb. per sq. in. The latest pressure survey, May 26, 1941, showed a pressure of 3,751 lb., a decline of about 0.75 lb. per day or 1 lb. per 1,397 bbl. of liquid. The recovery factor is the lowest for any pool in the state, principally because over 6 bbl. of reservoir space is being voided for each barrel of liquid recovered at the surface. Cumulative production to September 1 will be about 850,000 bbl.

Although the field has an effective water drive, it apparently is being produced at the present time with energy from the gas cap.

Surface separation

Both single and dual separation is employed at the well head. Most wells produce through bottom-hole chokes. Separation pressures range from 200 to 1,000 lb. per sq. in.

Allowable

The production is prorated on an acre-pound basis. Field production averages 2,100 bbl. daily, or 140 bbl. per well per day.

Pipe-line outlet

Standard Oil Co. of Louisiana serves the field with a pipe line, taking practically all liquid production in a newly laid 8-in. line connecting with the company's system in the Magnolia field. Gas production is used for drilling fuel, and the remaining production is flared. Operators in the field have pledged to sell all gas not required for field operation and development, to power the proposed South Arkansas steam-electric plants for aluminum manufacture.

PRODUCTION CHARACTERISTICS

Crude analysis

A representative sample of Dorcheat crude shows the following characteristics:

Gravity, °A.P.I.	48.6	Paraffin distillate:	
Color	red-green	Yield, per cent	26.0
Sulfur, per cent	0.55	Water-white distillate:	
Viscosity at 100° F.	31	Yield, per cent	31.0
Base	mixed	Gravity, °A.P.I.	46.8
Naphtha:		Gas oil:	
Yield, per cent	36.2	Yield, per cent	46.5
Gravity, °A.P.I.	67.6	Tar:	
		Yield, per cent	3.0

Gas analysis

A sample of Dorcheat gas shows the following content:

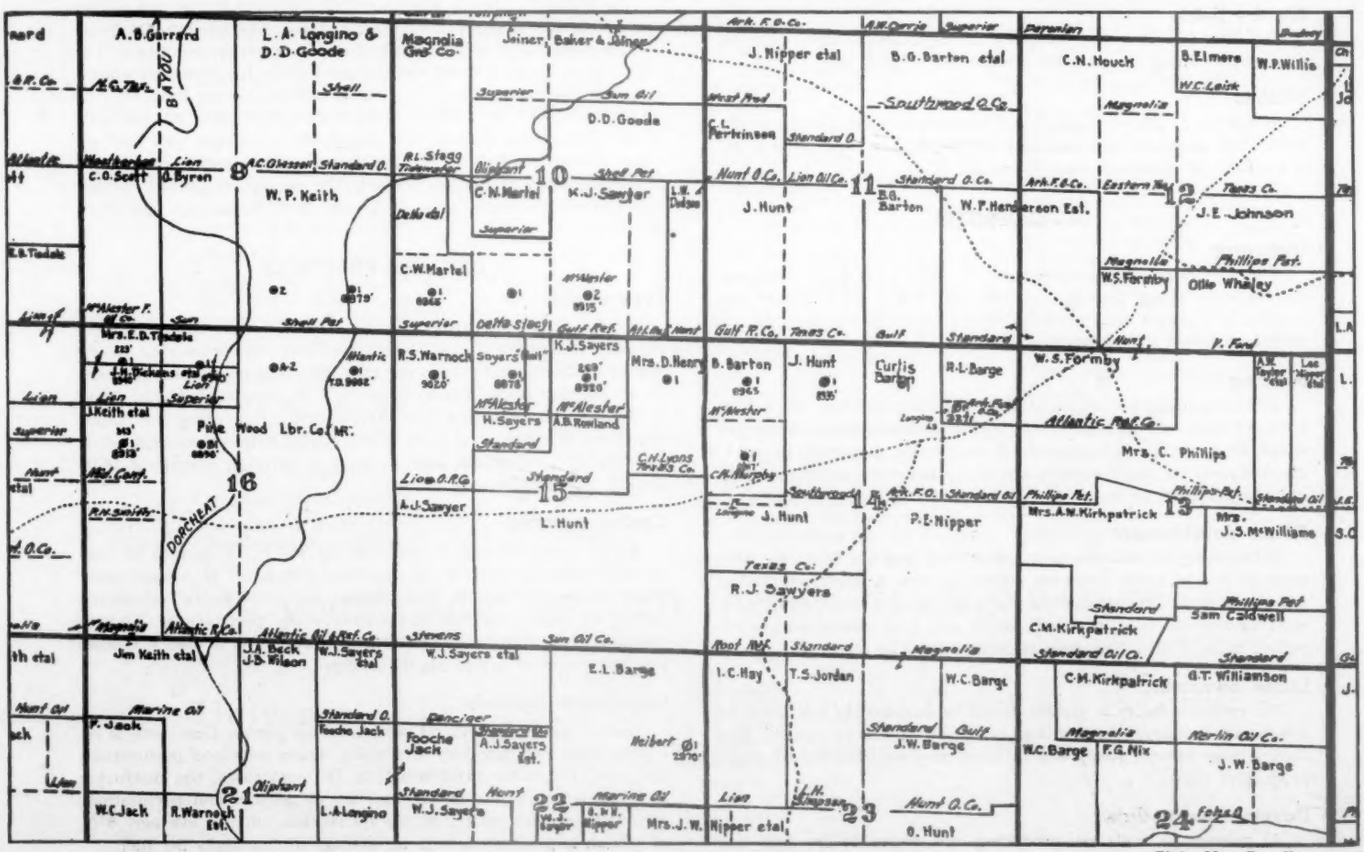
Specific gravity	.7334
B.t.u. (wet)	1,081
Gasoline content, g.p.m. 26/70 product	0.583
Hydrogen sulfide, grains/100 cu. ft.	1,945

Content:	Per cent
Hydrogen sulfide	3.10
Carbon dioxide	2.00
Methane	77.14
Ethane	5.83
Propane	2.76
Isobutane	1.14
n-Butane	1.19
Pentanes	0.82
Hexanes	0.25
Heptanes plus	0.07
Nitrogen	5.70
Total	100.00

Estimated reserves

Approximately 1,000 acres is now proven to production, and an additional 1,000 acres may be conservatively expected to prove productive. The field apparently is a part of a dual structure with the Macedonia gas-condensate pool, located 4½ miles east, but a saddle, indicated by the geophysical picture, is expected to separate the two pools.

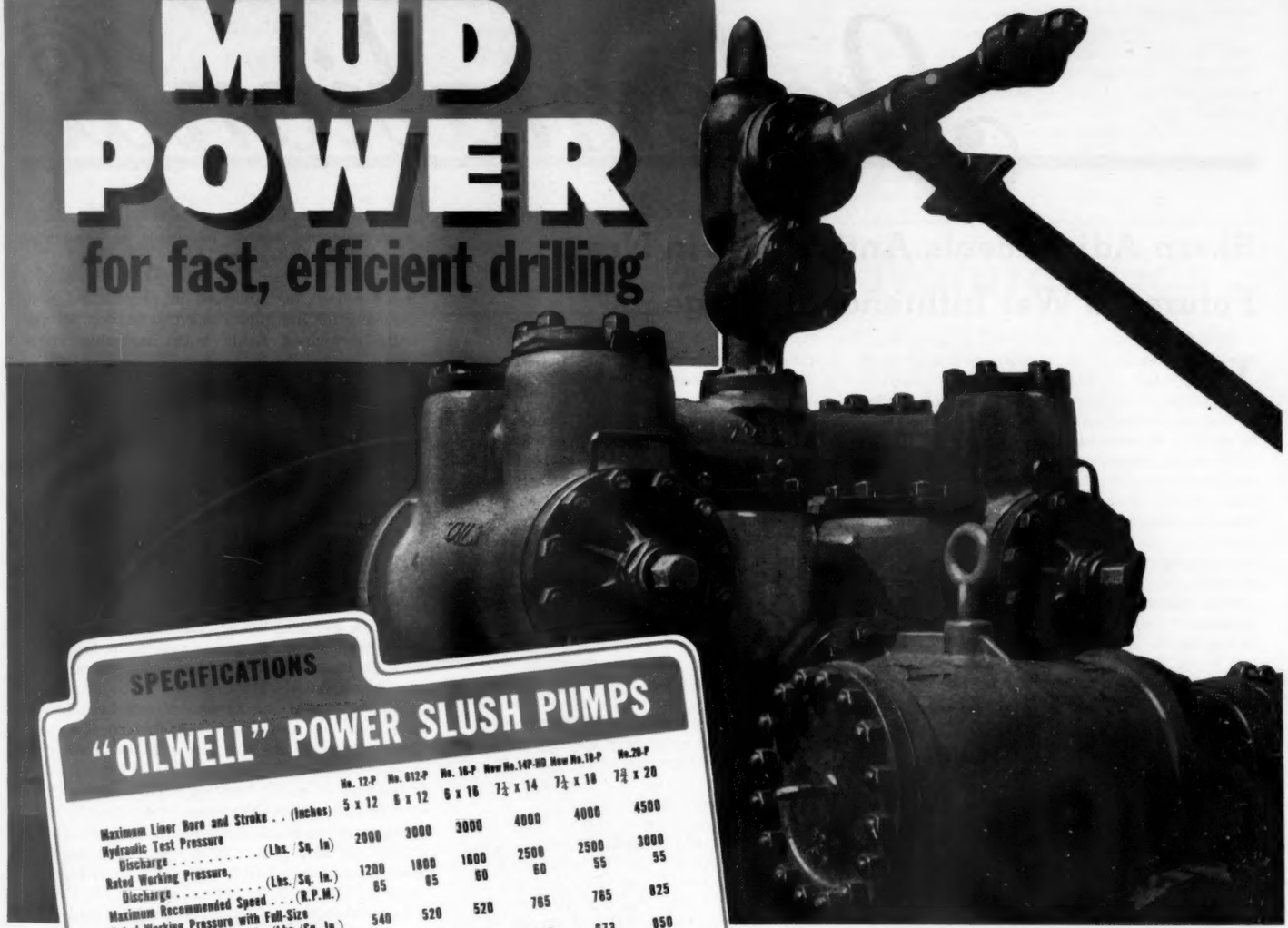
An estimated 144 billion cubic feet of gas is believed recoverable from the pool, together with an estimated 20 million barrels of oil and condensate. Future recoveries will depend greatly on surface separation methods and pressure-production relations.



Dorcheat field, Columbia County, Arkansas

MUD POWER

for fast, efficient drilling



SPECIFICATIONS

"OILWELL" POWER SLUSH PUMPS

	No. 12-P	No. 812-P	No. 16-P	New No.14P-HD	New No.18-P	No.20-P
Maximum Liner Bore and Stroke . . (Inches)	5 x 12	6 x 12	6 x 18	7¼ x 14	7¼ x 18	7¾ x 20
Hydraulic Test Pressure Discharge . . . . . (Lbs. / Sq. In)	2000	3000	3000	4000	4000	4500
Rated Working Pressure, Discharge . . . . . (Lbs./Sq. In.)	1200	1800	1800	2500	2500	3000
Maximum Recommended Speed . . . (R.P.M.)	65	65	60	60	55	55
Rated Working Pressure with Full-Size Liners at Maximum Speed . (Lbs./Sq. In.)	540	520	520	765	765	825
Theoretical Displacement at Maximum Speed (Piston rod areas deducted) . . (G.P.M)	251	364	447	570	673	850
Maximum Recommended Brake Horsepower Input at Maximum Speed . . . . . (H.P.)	92	129	159	300	353	480
Gross Weight with Short Skids: Domestic . . . . . (Pounds)	7500	10290	14785	23600	28700	44416
Export . . . . . (Pounds)	7900	10880	15393	24300	29700	45931

● *This sturdy "Oilwell" No. 14P-HD (7¼" x 14") Power Pump is part of an ultra-modern "Oilwell" Power Rig which recently opened a new pool near Shawnee, Oklahoma. The No. 14P-HD is a new pump with an exceptionally wide service range. It has the volume and pressure capacity for heavy-duty service but is compact and highly portable.*

"Oilwell" Power Slush Pumps are of high capacity in relation to size, and provide high-pressure circulation in ample volume. They are extremely dependable and low in operating cost.

● **POWER ENDS** are heavily ribbed castings, assuring a permanently rigid mounting for working parts. • The large-diameter alloy steel crank shafts and pinion shafts are fully heat-treated, as are the wide-faced, single-helical pinions. • All-roller-bearing design including roller bearing cross head pins reduces friction to a minimum and results in maximum mechanical efficiency. • Large capacity, adjustable, tapered roller bearings on shafts and crank pins result in minimum upkeep since bearings do not have to be replaced completely when slightly worn. • Renewable crosshead guides and adjustable crosshead shoes also assure low upkeep. • Lubrication is positive; and mud and dirt are effectively sealed out.

● **FLUID ENDS** are of the efficient, direct-flow type with large, streamlined passages. • Cylindrical sections give greatest strength in relation to weight; and no internal walls are subject to differential pressures. • DI-HARD liners, honed to a mirror finish, are standard equipment. The bonded armor of DI-HARD metal is well over 600 Brinell hardness and has a very low coefficient of friction. Shutdowns for liner replacement are much less frequent; and piston life is substantially prolonged.

● **LARGER SIZES** (No. 14P-HD, No. 18-P and No. 20-P) are now equipped with the new "Oilwell" Type "HD" Liner Spacers, adjusted externally by a single, large-diameter screw. A heavy-duty, roller thrust bearing facilitates free-turning. The spacer body contacts the entire face of the liner collar, holding the liner securely in place against the highest working pressures.

. . .

The very complete "Oilwell" line includes a dependable power pump of efficient size and ample capacity for every drilling need.

OIL WELL SUPPLY COMPANY

EXECUTIVE OFFICES—DALLAS, TEXAS
EXPORT DIVISION OFFICE—
30 ROCKEFELLER PLAZA, NEW YORK CITY

Branch Stores in All Oil Fields
United States Steel Corporation Subsidiary

DIVISION OFFICES
OIL CITY, PENNA. DALLAS, TEXAS
LOS ANGELES, CALIF.

International

Sharp Adjustments Anticipated in Near Future As War Influences Change

THE international oil situation is changing, in the opinion of well-informed oil executives, with indications that drastic adjustments, similar to that caused by the collapse of France, may be in store in the not distant future.

The war news clearly indicates to observers that the Near East oil fields are gradually coming closer to the scene of active hostilities, and that they may eventually be removed as an influence outside of the immediate areas involved. The same appears to apply to the Dutch East Indies oil fields.

This would mean that the world outside of Continental Europe may have to be supplied with oil for an extended period of years from North and South American sources almost exclusively. It foreshadows expansion of the oil fields and oil refineries in the Western Hemisphere to heights never before envisaged.

Already reports are being heard of new plans for expansion of South American oil holdings by major British, Dutch and American companies now heavily interested in Near East and Far East fields, indicating something like a major shift in their foreign activities, at least as far as some of them are concerned.

New plans for domestic refinery expansion are now being announced, most of them involving refineries on the seacoast. While part of this expansion is in response to mounting domestic national-defense requirements for aviation gasoline, it is also believed to foreshadow a protracted rise in export needs.

A record demand for American crude oil is expected to be one major result of the changing international picture. Output to date has been little ahead of the total of previous years, and it is pointed out in oil circles that a real test of United States underground petroleum reserves may develop before long.

While increased export demands on the domestic and South American oil industry will require more tanker tonnage, a portion of this demand may be supplied by ships which are expected to be released from the Near and Far East trades. American tanker-construction activities also will help materially. Offsetting factors are the possibility of longer hauls being required for existing tankers engaged in international trade, and the inevitable sinkings of oil-carrying vessels. A considerable movement of oil from Western Hemisphere areas to the Near East and Far East is foreseen by some oil executives.

Should the war reach a much higher tempo, as some anticipate, a generally increased demand for petroleum products abroad is expected to result. This will reverse the trend brought about by the fall of France and the stalemate in the conflict which lasted until the outbreak of hostilities between Germany and Russia, it is said.

Colombia . .

Value of Oil Exports Increased 20 Per Cent

VALUE of Colombia's petroleum exports in 1940 rose to $22,811,387, an increase of $4,535,389 over 1939, a report of the controller general issued last week reveals. Exports in 1940 totaled 22,426,498 bbl.

Most significant feature of the report beyond the gain in exports was the change in destinations of oil products. The largest increases were in shipments to Argentina which rose from 190,597 bbl. in 1939 to 1,000,577 bbl. in 1940 and in those to Canada which increased from 5,148,820 bbl. in 1939 to 9,203,423 bbl. in 1940.

These gains were offset to some degree by reductions in shipments to the Shell refinery at Curacao and the loss of European and West African markets. Czechoslovakia, Italy and France were lost during the year though a new European customer, Portugal, was acquired. Exports to the United States were 1.5 per cent of the total as against 5.6 per cent in 1939.

Colombian Petroleum Co. is drilling at 8,991 ft. in 1 Socuavo and is building road for 2 Socuavo. It is also building rig foundation for A-2 Tres Bocas, to which the derrick that drilled 2 Tres Bocas to 1,987 ft. before it was abandoned has been skidded.

This company was reported drilling and coring at 4,078 ft. in 1 South Sardinata and is building the road to 1 North Sardinata which will test a new structure between 1 South Sardinata and 1 Tres Bocas.

Bolivia . .

Argentina Financing Development Program

A LOAN of $467,000 from the Argentine Government is being used by Bolivia for new drilling in the Sanandita field in the southeastern part of the country, according to advice received in the United States.

Desire of Bolivia to increase its internal production of crude oil is owing in part to the increasing volume of imports disclosed in figures for 1940 which just now are becoming available. Bolivia abrogated its development contract with Standard Oil Co. of Bolivia, subsidiary of Standard Oil Co. (New Jersey) in 1936, alleging that the company violated one of the terms of the original agreement. In the 5 years since nationalizing its petroleum resources, Bolivia has made no substantial progress in development.

Prior to the start of the European war, Bolivia was reported far advanced in negotiations with Germany for line pipe needed to connect its partially developed fields with navigable rivers across the border in Argentina.

More recently, Bolivia has negotiated treaties with Argentina providing for construction of 32 miles of railroad line before February 1943, which will provide an outlet for Bolivia's oil production in the eastern part of the country. The line would extend from Yacuiba to Villa Montes.

Another portion of the agreement between Argentina and Bolivia provides for construction of a pipe line from the fields on the Bermejo River to connect with railroad facilities at Oran.

If Bolivian fields justify the expenditure, the agreement between the two governments provides for later construction of the railroad link from Villa Montes to Santa Cruz or Sucre in Argentina and for building the stretch from Balcarce to Tarija to Oran.

All sections of the agreement call for advance of funds by the Argentine Government and amortization of the loan from Bolivia's oil production.

Imports of motor fuel by Bolivia during 1940 declined to 49,320 bbl., from 56,820 bbl. in 1939. Imports of crude oil, however, increased to 272,100 bbl. in 1940 from 226,000 bbl. during the preceding year. Bolivian receipts of lubricating oils totaled 16,270 bbl. in 1940 against 12,120 bbl. in 1939, probably a reflection of the increased mining activity related to production of war supplies by the British and United States.

Netherland Indies . .

Royal Dutch Achieves Satisfactory Results

THE annual report of the Royal Dutch Petroleum Co., recently made public from the headquarters of that world-wide organization now located at Curacao, Dutch West Indies, states in part:

"The various measures taken to enable our company and its affiliated companies, formerly domiciled in The Hague, to function regularly outside the occupied territory of the Kingdom of the Netherlands have fully achieved the results expected. The business of the Royal Dutch-Shell group is called upon both in time of peace and of war to fulfill important tasks. It goes without saying that our company is wholeheartedly supporting the Allied cause.

"As was pointed out in our last report, our company and a number of affiliated companies moved their seats of incorporation to Willemstadt, Curacao, on May 10, 1940. . . . no measures which have been or will be taken by the present administration of occupied Holland can change this. Such administration lacks any authority to cancel this act or to nullify the legal effect of action thereunder. Furthermore, any such attempted cancellation or nullification could never affect a Curacao company as ours became in all legal respects on May 10, 1940."

This refining property at Bradford, Pa., formerly owned by Bradford Oil Refining Co., was purchased recently by Kendall Refining Co., Bradford, on its high bid of $305,250. Kendall plans to use the plant in connection with specialty products and for light-oil storage. The plant ceased runs to stills December 31, 1940

Refinery Expansion

Work Started on New 1,500-Bbl. Refinery at Reed City, Mich.

MOUNT PLEASANT, Mich.—Preliminary construction has started on a new refinery at Reed City, Mich., to give the nearby Reed City field a refinery outlet. The 1,500-bbl. plant is being built by Osceola Refining Co. The company purchased the shutdown plant of Glenco Refining Co. at Bloomington, Mich., and is dismantling and moving the plant to Reed City. The company has a contract with Weber Oil Co. for its crude supply.

Ray Andres, president of the Sweet Oil Refining Co., is head of the newly organized company. John P. O'Neill is vice president and Robert Fish is secretary-treasurer, both being of Big Rapids. F. J. McCormick, formerly with Old Dutch Refining Co., is in charge of construction and will continue as superintendent when the skimming plant is completed. Plans call for the plant being on stream about October 1.

Brown-Strauss Buys Rodessa Refinery at Shreveport, La.

SHREVEPORT, La.—The 10,000-bbl. refinery of Rodessa Oil & Refining Co. at Cedar Grove, La., was purchased by Brown-Strauss Corp. of Kansas City, Mo., at a bankrupt sale here last week. The plant, which has been shut down for some time, and the plant site of 80 acres was sold for $190,000 cash. The plant has a skimming capacity of 10,000 bbl. and a 6,000-bbl. Forward process type cracking unit.

U.O.P. Translating Russian Literature on Refining Processes

CHICAGO.—Much valuable research work in hydrocarbon chemistry is being carried on in Russia. Its importance is growing because a good deal of it is throwing new light on catalysis, the basic tool of research and development men in commercializing the new refining processes which are attracting world-wide attention, such as catalytic cracking, catalytic reforming, isomerization, aromatization, and others.

In order to make the results of Russian research broadly available to the scientific workers in the oil industry of the United States and other countries, Universal Oil Products Co. has undertaken the task of obtaining, sifting, translating and distributing to subscribing companies reports on Russian research work.

The Survey of Foreign Petroleum Literature, conducted by Universal, publishes weekly issues of translations and abstracts from materials appearing in 15 Russian journals and sometimes in books. Russia is now considered to be the second nation in importance in chemical research, the United States being the leader. Rapid development is observed along some lines of chemical research, notably catalysis, hydrocarbons, petroleum and organic chemistry in general. The Russian work in these fields is closely related to that being done in the United States, and hence is of great interest and value to American research workers.

Naph-Sol Buys Oklahoma City Refinery From Black Gold

Naph-Sol Refining Co. of Muskegon, Mich., has purchased the 2,000-bbl. refinery of Black Gold Refining Co. at Oklahoma City, Okla. W. E. Anderson, president of the Naph-Sol company, in making the announcement stated the plant would be operated along the same line as its 5,000-bbl. refinery at Muskegon. The Black Gold company was organized in 1930 at the height of the Oklahoma City field activity. The refinery, which includes a 1,000-bbl. Dubbs cracking unit, operated steadily during its early life but during recent years was shut down on several occasions due to low refinery prices. R. G. Cocanower will continue as manager for Naph-Sol, in charge of sales of the Oklahoma City plant.

Jobbers Take Increasing Share of Refinery Sales

WASHINGTON, D. C.—Petroleum refiners increased the share of their sales going to wholesalers and jobbers by more than 40 per cent from 1929 to 1939, a report of the Bureau of Foreign and Domestic Commerce reveals. The proportion of sales made through refiners' own bulk stations and terminals also increased about 10 per cent in this period, but sales direct to industrial, commercial, and governmental users were reduced by more than 50 per cent, and direct sales through their own retail service stations, and direct to other retailers, were each decreased about 75 per cent.

Sales through refiners' own bulk terminals comprise the largest share of their business, 67.3 per cent in 1939, compared with 60.3 per cent in 1929. Wholesalers' and jobbers' share grew from 18.3 per cent in 1929 to 21.4 per cent in 1935, and to 25.9 per cent in 1939. Proportion of 1939 and 1929 sales through other channels were: Through refiners' own service stations, 7.6 per cent in 1929 against 1.7 in 1939; to industrial, commercial and governmental users, 8.6 in 1929, 3.6 in 1939; direct to retailers, 5.2 in 1929, compared with 1.4 in 1939. These percentages, for comparative purposes, are based only on a part of the total value of refiners' sales.

Based on total 1939 sales of $2,573,224,000, the per cent by primary channels of distribution were: Own bulk terminals, 61.8; wholesalers and jobbers, 20.1; direct exports, 5.3; export intermediaries, 3.7; industrial, commercial and governmental users, 3.3; interplant transfers, 2.9; own service stations, 1.6; direct to retailers, 1.2; direct to household consumers, 0.1.

Natural Gas

California Natural-Gas Companies File Plan for Merger

LOS ANGELES, Calif.—Southern Counties Gas Co. and Santa Maria Gas Co. have filed with the California Railroad Commission in San Francisco an application for authority to permit the two companies to merge under the name of Southern Counties Gas Co., according to R. E. Easton, president of Santa Maria, and F. S. Wade, president of Southern Counties.

Under the proposed merger, which is subject to approval of the California Railroad Commission, the Southern Counties Gas Co. proposes to issue 15,000 shares of its $100 par common stock in exchange for a like number of shares of the $100 par capital stock of the Santa Maria Gas Co. The transmission and distribution systems of both companies are now physically interconnected. Southern Counties Gas Co. has supplied a considerable percentage of the gas used by the Santa Maria Gas Co. Both concerns are affiliated through ownership by Pacific Lighting Corp.

Natural Gasoline

Natural-Gasoline Production Continues to Increase

Production of natural gasoline continued to increase in June 1941, according to the monthly report prepared by the Bureau of Mines. The daily average in June was 7,133,000 gal. compared with 7,019,000 gal. in May 1941 and 6,161,000 gal. in June 1940. The principal increases occurred in Texas Gulf and East Texas districts and in Louisiana.

Monthly production during June, in thousands of gallons, of the various districts was as follows: Appalachian, 6,005; Illinois, Michigan, Kentucky, 5,317; Oklahoma, 30,961; Kansas, 5,254; Texas, 97,394; Louisiana, 9,601; Arkansas, 2,898; Rocky Mountain, 8,649; and California 47,911.

Stocks again increased, amounting to 261,870,000 gal. on hand June 30, compared with 245,952,000 on May 31, 1941, and 294,000,000 gal. on hand June 30, 1940. Stocks at refineries were 102,984,000 gal. on June 30 as compared with 100,296,000 on May 31, while stocks at plants and terminals were 158,886,000 and 145,656,000 gal., respectively.

Shipments to jobbers and retailers increased in June and were 23,394,000 gal. compared with 22,050,000 gal. in May, while shipments to refinery-owned bulk plants decreased from 5,964,000 gal. to 5,460,000. Exports decreased from 5,250,000 to 1,302,000 gal. The average vapor pressure decreased for shipments to refinery-owned bulk plants and exports, increased for jobbers, and remained the same for refineries. The weighted average for the month was 20 lb. compared with 19.9 lb. in May and 18.1 lb. in June 1940.

Shortage of Alloy Elements Big Factor in Priorities

(Continued from Page 24)

petroleum industry is nickel. The specific properties of nickel in producing greater strength with no sacrifice in ductility (or increase in brittleness) have not been duplicated by the use of any other element although for a few purposes manganese has been proposed as a possible substitute. Nickel steels usually with smaller amounts of molybdenum or chromium are used extensively in all phases of the petroleum industry—and in fact, S. A. E. 4615 steel (1.8 per cent Ni.—0.25 per cent Mo.—0.15 per cent carbon) was sold in larger quantity last year than any other alloy steel. The United States produces almost no nickel (perhaps 3,000 tons per year) but Canada produces about 85 per cent of the total world production. Thus, though temporary shortages of nickel may exist in time the Canadian mines can expand their output and doubtless adequate supplies soon will become available. Generally then, nickel cannot be classified as being of great strategic importance although at the present time much difficulty is experienced in obtaining nickel steels and alloys. Statistics on metallic nickel are given in Table 2.

TABLE 2—PRODUCTION AND IMPORTS OF NICKEL

(Data in short tons)

Year	U. S. imports less exports	World production	Canadian production
1935	.....	85,400	49,300
1936	.....	103,000	84,800
1937	49,965	132,600	112,453
1938	22,965	127,300	105,286
1939	54,629	.....	113,053
1940	80,474	.....	.....

Chromium.—Metallurgical-grade chromite ore is definitely of strategic importance because substantially all shipments come from far-removed sources. In recent years such ore has been obtained from Turkey, southern Rhodesia, New Caledonia, South Africa, Yugoslavia, Cuba, Greece, and the Philippine Islands. Fortunately, large stock piles of ore have been accumulated both by the government and by private interests. Domestic ores are of poor grade and it would require about 2 years to bring about a substantial production. Data concerning chromium production and consumption are indicated in Table 3.

TABLE 3—PRODUCTION AND CONSUMPTION OF CHROMITE ORE

(Data in long tons)

Year—	Apparent consumption	Approx. world production	From domestic mines
1925-29 (av.)	224,633	428,000	276
1935	259,578	780,000	515
1936	324,527	1,051,000	269
1937	556,237	1,260,000	2,321
1938	352,897	1,115,000	812
1939	321,125	1,149,000	3,614
1940	660,351	.....	2,662

TABLE 4—STATISTICS ON TUNGSTEN, VANADIUM, COBALT, AND MOLYBDENUM

	Molybdenum United States production, metric tons of metal	Cobalt, imports, all sorts of cobalt materials, lb.	Tungsten—United States production, metal, lb.	Tungsten—Imports, metal, lb.	Vanadium—United States production, metal, lb.	Vanadium—Imports, metal, lb.
1935	5,222	.....	2,279,369	.....	.....	.....
1936	7,795	2,783,437	2,485,893	.....	.....	.....
1937	13,344	2,560,060	3,331,020	.....	.....	.....
1938	15,103	1,803,542	2,897,036	185,799	1,613,155	1,384,320
1939	13,755	2,498,687	4,080,024	1,525,355	1,984,068	2,132,548
1940	15,564	11,396,267	5,062,199	5,647,534	2,090,601	2,574,951

The extreme hardness imparted by chromium is the fundamental reason for the use of this material. It is used in relatively small amounts in constructional steels but in amounts of 13 per cent and up in stainless steels for resisting rust or sulfide fumes, or for high-temperature furnace castings.

The elements molybdenum, vanadium, aluminum, magnesium, copper, and tungsten can in time be produced in sufficient amounts from mines in the United States. At the present time the demand for aluminum, vanadium, magnesium, zinc, and copper exceeds the regular output of our mines, but it should be possible to remedy this situation by drastic expansion. The capacity of our molybdenum mines appears to be adequate unless the use of this element as a substitute alloy should create an abnormal demand. The United States production of molybdenum is more than 90 per cent of that of the world total.

Production of tungsten in the United States is nearly adequate for domestic requirements, although about 25 per cent of our needs heretofore has been imported. Most of the imported ore came from China and hence in the present situation additional shipments may not be available for several years.

The United States produces about half of its requirements of vanadium and obtains the other half primarily from Peru. Other elements that are used in small amounts in steels required by the oil industry are cobalt (an ingredient of Stellite), columbium and titanium (in high-temperature steels) and zirconium. All of these materials are imported but no great difficulty should arise in obtaining the small amounts required because they are generally in the hands of friendly nations. Cobalt ore is obtained primarily from Canada and Chile, whereas the three other elements are obtained from Australia. Table 4 presents information on some of these less-strategic elements. The statistics used herein were obtained from the Minerals Yearbook of the Bureau of Mines.

Production Only Aluminum Question

Aluminum.—No discussion of strategic metals is complete without a mention of aluminum. Normally, however, aluminum is not classed as a strategic material by most metallurgists because of the vast production which is possible in the United States. The present difficulty in getting enough aluminum is one of time and is due to the enormous new consumption for airplane construction and the present lack of electrical power for the operation of plants. The emergency can be met with some success by donations of aluminum equipment by the public because even the secondary aluminum production of the United States usually exceeds 100,000,000 lb. per year. Statistics on aluminum are shown in Table 5.

TABLE 5—UNITED STATES STATISTICS ON ALUMINUM

(Data in pounds)

	Production	Apparent consumption	Axis sources,* approx. production	British sources, approx. production
1935	119,295,000	191,645,888	316,000,000	256,000,000
1936	224,929,000	275,443,818	409,000,000	385,000,000
1937	292,681,000	335,958,553	551,000,000	510,000,000
1938	286,882,000	179,045,203	695,000,000	580,000,000
1939	327,090,000	335,337,860	715,000,000	713,000,000

*Germany, France, Austria, Hungary, Italy, Japan, Norway, Spain, Sweden, Switzerland and Yugoslavia.

The petroleum industry is not a great user of aluminum, some uses being for instrument boxes and parts, truck bodies, tanks for oil trucks, bubble caps in fractionating towers, cables for telephone lines, and minor amounts in alloys. Aluminum is also used in connection with tanks, manhole covers, measuring rods, funnels, foil or paint, breathers, flame arresters, floats and chains on tank gages, and ladders. All of these uses are of such a nature that substitution of other metallic materials can be made easily.

CALENDAR

August

MISSISSIPPI OIL EXPOSITION, Yazoo City, Miss., August 25-30.

KANSAS GEOLOGICAL SOCIETY, fifteenth annual field conference, August 27-31.

MISSISSIPPI OIL EXPOSITION, Yazoo City, Miss., August 27-29.

September

AMERICAN CHEMICAL SOCIETY, Atlantic City, N. J., September 8-12.

PACIFIC COAST GAS ASSOCIATION, annual convention, Del Monte, Calif., September 10-13.

NATIONAL PETROLEUM ASSOCIATION, thirty-ninth annual meeting, Hotel Traymore, Atlantic City, N. J., September 17-19.

SOCIETY OF AUTOMOTIVE ENGINEERS, national tractor meeting, Schroeder Hotel, Milwaukee, Wis., September 25-26.

NATIONAL LUBRICATING GREASE INSTITUTE, ninth annual meeting, Stevens Hotel, Chicago, September 29-30.

October

WEST VIRGINIA OIL AND NATURAL GAS ASSOCIATION, annual convention, Clarksburg, W. Va., October 2-3.

NATIONAL FOREIGN TRADE CONVENTION, twenty-eighth meeting, Hotel Pennsylvania, New York City, October 6-8.

NATIONAL SAFETY CONGRESS, Stevens Hotel, Chicago, October 6-9.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION, twenty-second annual convention, Beaumont, Tex., October 9-11.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, Pacific section, Los Angeles, Calif., October 16-17.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Dallas, Tex., October 16-18.

NATIONAL STRIPPER WELL ASSOCIATION, Tulsa, October 20.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, twelfth annual meeting, Tulsa, October 20-21-22.

SOCIETY OF AUTOMTIVE ENGINEERS, national fuels and lubricants meeting, Mayo Hotel, Tulsa, October 23-24.

CALIFORNIA NATURAL GASOLINE ASSOCIATION, Los Angeles, Calif., October 31.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Southern California Section, Los Angeles, Calif., October 30-31.

SOCIETY OF AUTOMOTIVE ENGINEERS, national aircraft production meeting, Biltmore Hotel, Los Angeles, Calif., October 30-November 1.

CALIFORNIA NATURAL GASOLINE ASSOCIATION, Los Angeles, Calif., October 31

November

AMERICAN PETROLEUM INSTITUTE, twenty-second annual meeting, St. Francis and Palace Hotels, San Francisco, Calif., November 3-7.

SOCIETY OF AUTOMOTIVE ENGINEERS, West Coast transportation and maintenance meeting, San Francisco, Calif., November 5-6.

SOCIETY OF AUTOMOTIVE ENGINEERS, national transportation and maintenance meeting, Statler Hotel, Cleveland, Ohio, November 13-14.

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Maintenance of roadways is a major problem in a mountainous area such as that near Sea Cliff in Ventura County, California. Heavy rains make it necessary to use heavy tractors equipped with blades for re-establishing the grade. In the background can be seen a causeway built for drilling offshore

ENGINEERING & OPERATION

In This Section

AUGUST 21, 1941

DOUGLAS OIL COMPLETES LARGE REFINERY AT WILMINGTON
By L. P. Stockman ..... Page 40

Maximum flexibility and economy of operation are provided in the new 10,000-bbl. refinery recently completed by Douglas Oil & Refining Co. near Wilmington, Calif. The 8,000-bbl. two-coil cracking unit is designed to operate on a variety of charging stocks, and provision is made for increasing the plant capacity with a minimum of work.

IDENTIFYING OKLAHOMA CITY BRINES BY CORRELATING CHEMICAL ANALYSES
By Helen Hibbard and E. J. Gatchell ..... Page 45

The technique by which brines from the Oklahoma City field are identified by correlation of their chemical analyses is dealt with. The brines are identified by comparing certain indices derived from a precise chemical analysis, with standards set up for formation brines in that area.

COMPLETE TEDIOUS WORKOVER JOB IN DEEP WELL ON GULF COAST
By Neil Williams ..... Page 48

In the Old Ocean field on the Texas Gulf Coast an unusually tedious and exacting deep-well workover job was recently completed. The work involved an attempt to restore production from a 10,100-ft. horizon in which the well had ceased flowing prematurely due to salt-water intrusion.

ELECTRIC PUMPING UNITS GAINING FAVOR IN WEST VIRGINIA FIELDS
By H. S. Brubaker ..... Page 52

In the northern portion of West Virginia the rapidly increasing rural extensions of electric lines in stripper-well areas is resulting in greater acceptance of electricity for pumping.

SIMPLE GRINDER IS USED TO RECONDITION VALVE SEATS
By E. W. Nichols ..... Page 57

The practice of reconditioning valves makes possible appreciable savings due to the large number used in the fields and refineries. Here a pneumatic grinder assembly for reclaiming wedge gate oil refinery valves is described.

OPERATING IDEAS ..... Page 48

HEAVY TRACTOR HAULED ON LARGE TANDEM TRUCK ..... Page 80

QUESTIONS ON TECHNOLOGY—By W. L. Nelson ..... Page 56

Douglas Oil Completes Large Refinery at Wilmington

By L. P. STOCKMAN

Douglas Oil & Refining Co. recently completed a new 10,000-bbl. refinery near Wilmington, Calif., in which maximum flexibility and economy of operation are provided. The 9,000-bbl. cracking unit is designed to operate on a variety of charging stocks. Present facilities are so constructed that additional equipment to increase capacity can be installed with a minimum of work.

WHEN the B-19, 82-ton Douglas bomber, largest plane yet built, made its initial flight recently from the Santa Monica plant of Douglas Aircraft Co. to Riverside it passed over another undertaking of Donald Douglas at South Figueroa Street and East Road about midway between Los Angeles and Wilmington. This new plant, which contains a Dubbs two-coil selective cracking unit with crude distillation, absorption, and stabilization, was licensed by Universal Oil Products Co. and constructed by Fluor Corp. of Los Angeles in less than 6 months in the face of inclement weather during the early part of the year and later delays due to priorities. Rain interfered with construction work for a period of 49 days during the 180-day contract, but the contractor made up for lost time and finished the job in less than the allotted time. Hot clay and doctor sweetening units together with some additional tankage, boilers and yard arrangements are at present being completed by the Oil Field Construction Co.

The plant, through arrangement with Sunset Oil Co., has pipe-line connections with several Los Angeles Basin fields and a black and white line extending to tidewater at Los Angeles Harbor for bunkering and bulk loading facilities. Officers of Douglas Oil & Refining Co. are Donald W. Douglas, chairman of the board; George W. Stratton, president; William P. Andrews, vice president; A. L. Bergere, secretary-treasurer and David C. Moore, assistant secretary-treasurer. Construction work was under supervision of engineers of the Fluor Corp., Ltd., and William P. Andrews, vice president of Douglas Oil & Refining Co.

Cracking Facilities

The cracking unit of this new refinery is designed to process approximately 9,000 bbl. per day of 17 A.P.I. gravity reduced crude, yielding about 3,300 bbl. of 400-end point 10-lb. R.v.p. gasoline, residuum approximating Bunker B specifications and gas. The distillation unit is designed to charge 9,000 to 10,000 bbl. per day of 25 to 26-gravity mixed Los Angeles Basin crude. The yield is about 20 per cent 350-end point light gasoline, approximately 7 per cent of 425-end point naphtha, 6 per cent kerosene distillate, and about 6,600 bbl. of 17-gravity reduced crude for charging to the cracking unit. Remainder of the needed reduced crude charge to the cracking section will be made up of 17-gravity reduced crude withdrawn from stocks.

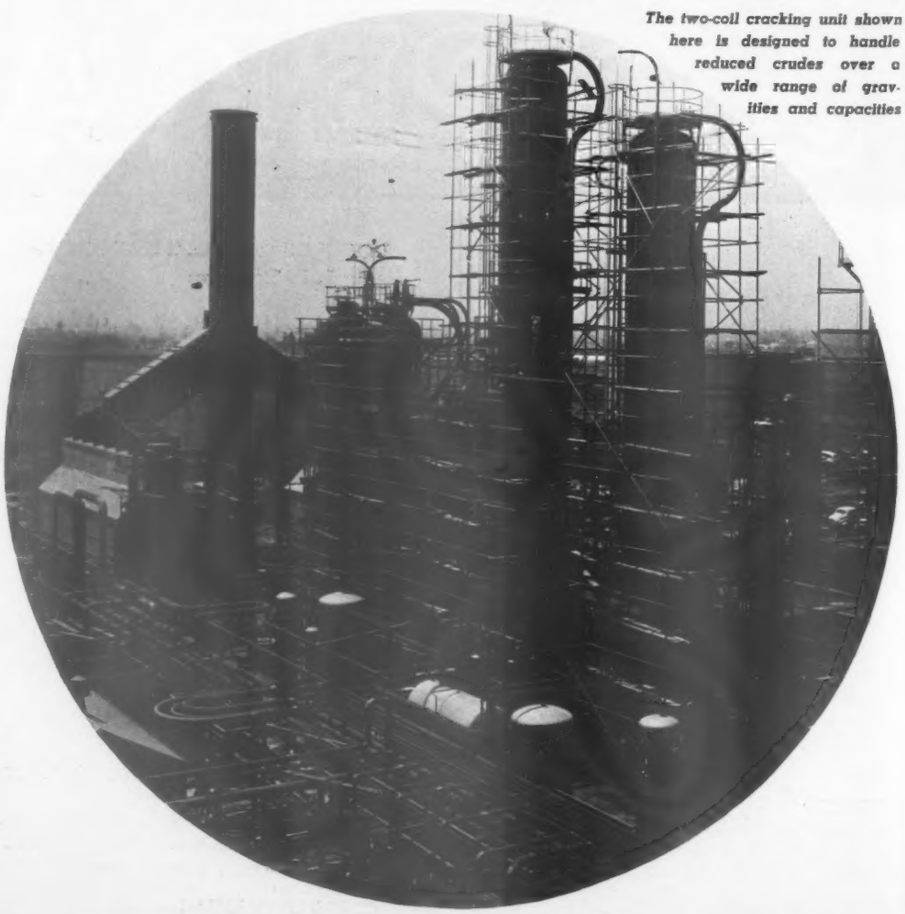
The designed capacity of this plant does not represent its maximum operating capacity as it is quite possible that it can handle 12,000 bbl. per day of charging stock easily. Present facilities are so constructed that additional equipment to increase capacity can be installed with a minimum of work. Provision has been made in the design of all major equipment to permit increasing the crude charging stock to 12,000 bbl. per day of 25 to 26-gravity mixed crude to make the same percentages of light straightrun gasoline, naphtha and kerosene as at present. This increase would provide a charge of 17-gravity reduced crude to the cracking section of about 9,000 bbl. daily.

Provision has also been made in the crude column whereby an additional side cut can be made of approximately 6 per cent of 30 to 32-gravity gas oil. To effect this increased capacity would only require installation of a crude prefractionating column with an overhead condenser, receiver, prefractionating column bottoms pump, an additional crude heater and other minor equipment.

Size of present major equipment in the new plant is based on a charging stock of about 10,000 bbl. daily of 25 to 26-gravity mixed crude to the crude distillation section and 9,000 bbl. per day of reduced crude to the cracking unit. The cracking section of the unit, although designed for this type of charging stock, will also handle other reduced crudes over a substantial range of gravity and capacities. Maximum degree of flexibility is available in the crude-distillation section and the capacities and yields of this section of the plant are likewise dependent upon the characteristics of the charging stock.

Operating Procedure

Crude oil is charged through a heat exchanger, crude settler, additional heat exchanger and crude heater to the crude fractionating column. Light gasoline is removed overhead and naphtha and kerosene side cuts are withdrawn from the column. Light gasoline and reflux pass from the top of the column through a condenser to a receiver. Top temperature of the column is regulated by return of reflux and the net production of light gasoline is then pumped to storage. The kerosene side cut passes through a side-cut stripper and thence through a cooler to storage. Initially, the



The two-coil cracking unit shown here is designed to handle reduced crudes over a wide range of gravities and capacities

naphtha side cut will be withdrawn directly through a cooler to storage. Hot reduced crude from the bottom of the crude column and reduced crude from storage are charged to the fractionating column in the cracking unit over side-to-side pans. The reduced crude from storage, comprising part of this charging stock, will be heated by exchange with residuum before entering the column.

From the bottom of the fractionating column, the heavy end of the reduced crude mixed with heavy recycle stock is charged to a heavy-oil heater. At the inlet of the heater, the heavy oil is split into two parallel streams and then after passing through the heavy-oil heater, the two streams are again combined into a single transfer line to the reaction chamber. The light recycle stock mixed with low-boiling fractions of the raw oil collects in the center well of the fractionating column and is then charged to the light-oil heater. It is then charged from the light-oil heater to the reaction chamber through a separate connection. Products from the light and heavy-oil heaters pass downward through the reaction chamber and are drawn off from the bottom of the chamber through a streamlined angle-type pressure-control valve and moved to the bottom of the flash chamber at reduced pressure.

Flash Chamber

Bottoms from the flash chamber are drawn off through a liquid level control valve to the residuum stripping column. Control of the gravity and flash point of the flashed residuum is effected by a reduction in pressure between the flash chamber and the stripping column, regulations of pressure and the return of reflux to the top of the column. The flashed residuum is blended ahead of the reduced crude exchanger with a stripped distillate from the fractionating column to attain the desired viscosity of blended residuum. From the top of the stripping column, flashed distillate and reflux passed through a condenser to a receiver. The reflux is returned to the top of the stripping column and flashed distillate is used as cooling oil at the drawoff of the reaction chamber and at the top of the primary flash chamber.

From the bottom of the stripping column, flashed residuum is drawn and pumped through a crude exchanger and, after being blended with distillate, passes through a reduced crude exchanger and cooler to storage. The side-cut blending stock is withdrawn from the fractionating column, stripped at reduced pressure, and blended with flashed residuum. The overhead from the stripper is returned to the column with excess light cooling oil.

Vapors from the top of the flash chamber enter near the bottom of the fractionating column and pass upward countercurrent to the raw-oil charge. Gas and end-point distillate pass overhead from the column through a condenser, reflux receiver and subcooler to the distillate receiver. Top temperature of the column is regulated by distillate returned from the reflux receiver. Unstabilized end-point distillate from the distillate receiver is charged through a heat exchanger to the stabilizer column. Gas from the distillate receiver enters the bottom of the absorption column and rises countercurrent to cooled light oil. Stripped gas from the top of the absorption column passes through a back-pressure regulator to the fuel-gas header.

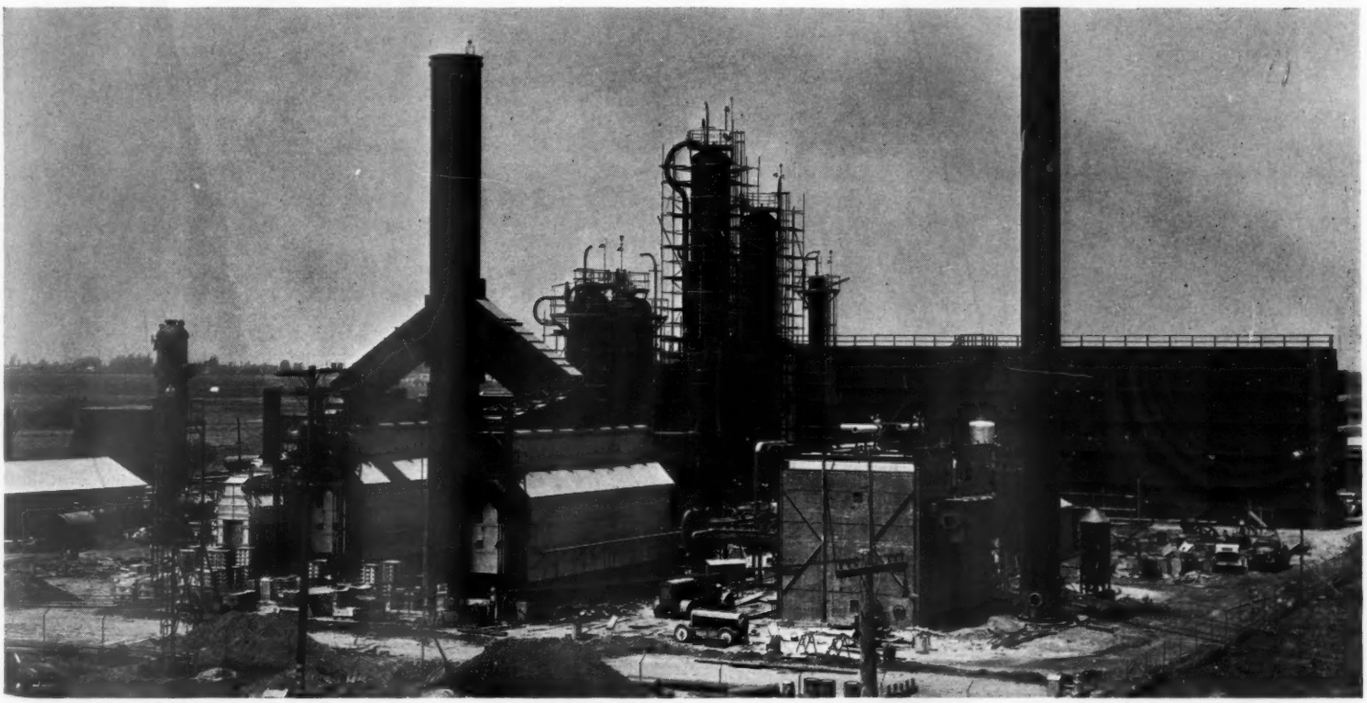
Temperature and pressure of the stabilizer reboiler are controlled, and reflux is returned to the top of the column, to produce desired pressure distillate as a bottom product. Excess gas from the stabilizer passes through a pressure regulator to either the bottom of the absorption column or directly to fuel gas.

Whenever the capacity of this plant is increased, the heated crude oil from the residuum exchanger will pass to a prefractionating column instead of to the crude-fractionating column as at present. Light gasoline will be removed overhead from the prefractionating column and the bottoms will then be charged through the crude heater to the crude-fractionating column. Naphtha would be taken overhead and kerosene withdrawn through the side-cut stripper. An additional side cut of gas oil would be withdrawn through a cooler to storage. Reduced crude bottoms from the crude-fractionating column, along with reduced crude made up from storage, would be charged to the main fractionating column.

Pressure Vessels and Auxiliary Equipment

All pressure vessels are of Grade A quality steel fabricated by the electric fusion-welding process. The reaction chamber, flash chamber, residuum stripping column and the fractionating column were all stress-relieved in accordance with A.P.I.-A.S.M.E. codes. The vessels are alloy-lined, consisting of chrome 11.5 to 13.5 per cent; carbon 0.08 per cent; manganese 0.50 per cent; sulfur 0.025 per cent; silicon 0.50 per cent; aluminum 0.20 to 0.30 per cent, and phosphorous 0.025 per cent maximum.

Heat-resisting concrete, fireproof wire-mesh glass and explosionproof lighting equipment were used throughout. The control house is of steel construction with corrugated galvanized-iron roof and sides and amply ventilated. All electrical equipment conforms with A.I.E.E.-N.E.M.A. and N.E.C. standards as well as California safety requirements. Lighting equipment in the process area is explosionproof and connections are vapor-tight. The motors, which are enclosed, operate on 440 volts, three-phase, 50 cycles and are explosionproof. Chemical composition of all steel castings are within a strict range which comprises 25 to 27 per cent chromium; 10 to 12 per cent nickel; 0.25 to 0.50 per cent carbon; 0.50 to 1.50 per cent silicon and 0.50 to 1.00 per cent manganese. All vessels in the entire plant that have surface temperatures of 175° F. or higher are insulated.



Construction view of the new Douglas refinery with the cracking and skimming heaters shown in the foreground and process columns and cooling tower in the background

Pressure Equipment.

The main fractionating column, which is equipped with liquid-level controller and recording-temperature controller with automatic reset range of 200°-450° F., has an operating temperature of from 500° to 750° F. and a maximum pressure of 105 lb. It has a diameter of 8 ft., is

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April 11, 1941.

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Gentlemen:

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According to our records, your valves require approximately 90% less maintenance expense than any other mud valve we have ever used. To date, all of our eight rigs are completely equipped with "Flex-Seal" valves and they will be installed on a ninth rig, now being assembled, in the near future.

The fact that your valve opens and closes easily under pressure and may be completely overhauled at the rig also deserves a full measure of praise.

Please feel free to pass this information along to other operators, many of whom are no doubt experiencing difficulty with conventional plug valves and stop cocks.

Very truly yours,

O. W. Dyer, Sr.

O. W. Dyer, Jr.

Split bonnet, held together by two alloy steel bolts, facilitates renewing stem packer.
Gate stem reveals extent of wear on resilient flow-way insert when valve is in closed position.
Lip-type stem packer requires no packing gland.
Heat treated alloy steel gate shown in closed position embedded in the resilient flow-way insert. In open position it is retracted completely out of the flow-way.
Renewable resilient flow-way insert which absorbs cutting action of abrasive-laden fluid and which may be replaced in the field, quickly and at low cost. Note how the resilient insert provides a pressure-tight seat for the gate and seals the two-piece valve body.
Replaceable alloy steel wear ring which protects the hub ends against cutting.
Forged steel body in two pieces to facilitate changing the flow-way insert.
Hubs with any type of end connection desired are interchangeable and are attached to the body by interlocking shoulders and grooves. Loosen the body bolts and the hubs will swivel like a union when making up in a manifold.

Now Available in
4000 LB. TEST MODEL
Similar to
6000 LB. TEST MODEL
Shown at Left

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67 ft. in length and has a shell thickness of from ¾ to ⅞ in. The fractionating column side-cut stripper has a diameter of 3 ft., is 12 ft. in length and has a shell thickness of 7/16 in. It is designed for an operating temperature of 615° F., and a maximum operating pressure of 105 lb. The fractionating column side-cut stripper overhead receiver has a diameter of 2 ft., is 7 ft. in length and has a shell thickness of ⅝ in. Its designed temperature is 150° F., and the maximum operating pressure is 105 lb.

The side-cut stripper on the fractionating column has a bottoms pump and an overhead pump. The former is a 7½ by 4½ by 10-in. horizontal, duplex, piston-pattern, side-pot valve-type pump with a working pressure on the steam end of 200 lb. and 300 lb. on the liquid end at 600° F. This pump has a capacity of 27 gal. per minute of hot oil and at a discharge pressure of 100-190 lb. The overhead pump of the fractionating side-cut stripper is a 5¼ by 3½ by 5-in. horizontal, duplex, piston-valve-type pump with a working pressure of 200 lb. on the steam end and 250 lb. on the liquid end. Pumping 40-45-gravity oil at a pumping temperature of 95° F., it will have a capacity of 15 g.p.m. of hot volume. The fractionating-column reflux accumulator has a diameter of 5.5 ft. and is 12 ft. in length with a wall thickness of ½ in. The operating temperature is 150° F., and maximum operating pressure 105 lb.

The fractionator-column reflux pump is a horizontal, split single-stage centrifugal driven by a horizontal single-stage steam turbine. Capacity is 240 g.p.m. of hot oil under a speed of 3,600 r.p.m. Pumping temperature is 130° F., and gravity of the oil at 60° F. is expected to be 64°-66° A.P.I. Suction pressure will be 90-105 lb. and discharge pressure 170-185 lb. per sq. in.

The fractionating-column distillate receiver has a diameter of 5.5 ft. and a length of 12 ft. with a wall thickness of ½ in. It was designed for an operating temperature of 150° F., and a maximum pressure of 105 lb. The stabilizer column has a diameter of 3.5 ft., a length of 55 ft. and a wall thickness of ⅝ in. It will operate at 140° F. and a pressure of 225 lb. The stabilizer reflux accumulator has the same diameter, shell thickness and maximum pressure but is 10 ft. in length and has a designed operating temperature of 150° F. The absorption column has a diameter of 3.5 ft., a length of 33 ft. and a wall thickness of ⅝ in. Its operating temperature is 150° F. and maximum pressure of 105 lb.

The absorption bottoms pump is a 7½ by 4½ by 10-in. horizontal, duplex, piston-valve-type pump that has a working pressure of 200 lb. on the steam end and 250 lb. on the liquid end. Pumping temperature will range from 100°-110° F., and suction and discharge pressures will be 90-105 lb. and 175-190 lb. per sq. in., respectively. The crude-fractionating column has a diameter of 7.5 ft., a length of 56 ft. and a shell thickness of 7/16 in. Operating temperature is 675° F., and maximum pressure is 30 lb. The crude side-cut stripper has a diameter of 3 ft., a length of 12 ft. and a wall thickness of 7/16 in. Operating pressure is 30 lb., and temperature is 650° F. The crude-fractionating column receiver has a diameter of 6 ft., a length of 8 ft., a wall thickness of 6/16 in., a temperature of 150° F., and a maximum operating pressure of 30 lb.

Reaction Chamber

The reaction chamber and the residuum stripping column each have a diameter of 6 ft., but the former has a length of 40 ft., whereas the latter is 25 ft. long. The reaction chamber has a wall thickness of 1½ in., an operating temperature of 950° F., and pressure of 350 lb. The residuum stripper column has a shell thickness of 11/16 in., an operating temperature of 840° F., and a maximum pressure of 115 lb.

A 7½ by 4½ by 10-in. horizontal, duplex, piston-valve-type residuum stripping-column overhead pump is used in conjunction with the residuum stripper column. This pump has maximum working pressures on the steam end of 200 lb. and on the liquid end of 250 lb. The flashed residuum pump is a horizontal centrifugal steam-turbine-driven pump with a capacity of 160-190 g.p.m. of hot oil at a speed of 3,600 r.p.m. This flashed residuum will have an average gravity of 5°-10° A.P.I. and the pumping temperature will be 725°-750° F. The flash chamber is 35 ft. in length, has a diameter of 8 ft. and a shell thickness of 1 in. Designed operating temperature is 850° F., and maximum pressure is 115 lb.

The residuum stripping-column overhead receiver has a diameter of 3 ft., a length of 10 ft. and a wall thickness of ⅝ in. It was designed to operate at 150° F. under a pressure of 115 lb. The horizontal crude-settling tank has a diameter of 8 ft., is 42 ft. in length and has a wall thickness of 1 3/16 in. and the vertical settling tank has a diameter of 6.5 ft. and is 30 ft. in length. Both were designed to operate at 400° F., and under a pressure of 200 lb.

Heaters and Pumps

The three heaters used in this plant, light-oil heater, heavy-oil heater and updraft crude heater, are gas-fired and contain seamless steel tubes constructed in accordance with A.S.T.M. specifications for this material. The walls of all three heaters are insulated with suitable material to sustain a temperature of 1,600° F.

Gas burners are the inspirating venturi premix type for burning a natural or refinery gas. Each burner consists of an inspirator tube and two burner nozzles. The burners are so arranged that they induce up to 100 per cent of theoretical air through the inspirator and an additional 25 per cent around the burner nozzle. The burners operate at a pressure of 12-15 lb. per sq. in. at the burner end. The light-oil heater contains 30-ft. tubes and 18 burners each with a capacity of 1,600 cu. ft. hourly and the heavy-oil heater contains tubes 50 ft. in length and 28 burners each with a capacity of 1,650 cu. ft. hourly. The updraft crude heater has tubes 20 ft. long and two gas burners each with a capacity of 5,500 cu. ft. per hour.

The light-oil-heater charge pump is a multistage horizontal centrifugal pump driven by a horizontal single-stage steam turbine. This pump has a capacity of 190-250 g.p.m. of hot oil under a speed of 3,600 r.p.m. Gravity of oil to be pumped is expected to be 25°-27° A.P.I. at 60° F. Pumping temperature should be around 600° F., with suction pressures at 105 lb. and discharge pressures at 645-925 lb. The heavy-oil-heater pump is likewise a multistage horizontal centrifugal pump driven by a steam turbine. This pump has a rated capacity of 590-780 g.p.m. under a pump speed of 3,600 r.p.m. At 60° F. the oil to be pumped should have a gravity of 18°-19° A.P.I. Pumping temperature is 725° F., and the suction and discharge pressures should be 105 lb. and 625-850 lb. per sq. in, respectively.

Crude-Charging Pumps

The crude-charge pump is a horizontal split multistage centrifugal pump driven by a horizontal single-stage steam turbine which has a capacity of 310 g.p.m. of hot oil at a pump speed of 3,600 r.p.m. Pumping 24°-27° A.P.I. gravity hot oil at a pumping temperature of 90° F., it will have a discharge pressure of 320 lb. per sq. in. The crude-column overhead pump is a horizontal multistage centrifugal pump driven by a single-stage steam turbine. At a pump speed of 3,600 r.p.m. and moving 46-65-gravity oil at a temperature of 95° F., it has a capacity of 170 g.p.m. To remove reduced crude from storage into the system a duplex steam pump is used. This pump handles 15-19-gravity oil at a pumping temperature of 125° F. and has a capacity of 200 g.p.m. It will discharge at 200-230 lb. per sq. in.

Doctor Sweetening—Compressors—Boilers

Oil Field Construction Co., engineering contractors of Long Beach, Calif., are putting the finishing touches on a gasoline treating plant, doctor sweetening unit, boiler plant with all auxiliary equipment and piping, compressor plant complete with piping, piping at the company's tank farm, unloading facilities and miscellaneous concrete structures. Due to priority rating, delivery of some of the material and equipment in connection with the doctor treater resulted in some delay in construction. However, the necessary material has been received and the contractor's work is nearing completion.

The sweetening plant is a U.O.P. design for 2,500 bbl. per stream-day of cracked gasoline with caustic washing and regeneration, doctor sweetening and regeneration, and U.O.P. No. 4 inhibitor injection. One large compound steam-driven air compressor and one separate steam-driven air compressor will furnish the necessary air for operation of the complete plant and for shutdown.

Two 604-hp., 190-lb. working pressure, sinuous sectional header boilers will supply the total steam requirements of the plant. Boilers are set for 200 per cent of normal rating with a maximum heat release in the furnace of approximately 25,000 B.t.u. per cu. ft. Boilers will be normally fired with gas with complete automatic oil firing for standby. Regulation of boiler feed will be accomplished with the latest type feed-water regulator. The liquid level in the deaerating feed-water heater will be controlled by an electroller. All auxiliary equipment such as boiler feed pumps, deaerating feed-water heater, piping and other equipment were selected and laid out to provide for further expansion.

BOOKS

TEXAS PETROLEUM REGISTER, W. R. Byram & Co. Price $10.

This volume, just off the press, presents a list of all the corporations, partnerships and individuals producing oil in Texas. The corporate officials, the home address, the branch offices, the capital stock and the officers of each company are shown, together with the fields in which each of these companies produces. The second section lists each field in the state as it is designated by the Railroad Commission, together with the names of operators in those fields, and the number of leases and wells each has. Also listed are the addresses of the district offices of the companies owning the leases.

Other sections list gas producers, natural-gasoline plants, pipe-line companies, refineries, carbon-black plants, registered engineers and service and supply companies.

Texas Petroleum Register may be purchased through the Book Department of The Oil and Gas Journal at the established retail price of $10, postage prepaid (extra outside of the United States), and a copy will be forwarded promptly upon receipt of check or money order for that sum. Where payment is not provided, the book will be sent c.o.d. to avoid delay.

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Identifying Oklahoma City Field Brines by Correlating Chemical Analyses

By HELEN HIBBARD and E. J. GATCHELL
Phillips Petroleum Co., Bartlesville, Okla.

SUMMARY

This article deals with the technique by which brines from the Oklahoma City field are identified by correlation of their chemical analyses.

Brines are identified by comparing certain indices derived from a precise chemical analysis, with standards set up for typical formation brines in that area. For the Oklahoma City field the significant indices are total dissolved solids expressed as parts per million and calcium, magnesium, and sulfates expressed as per cent of the total dissolved solids.

Positive identification can be made of brines from the Arbuckle lime, lower Simpson, Johnson and Wilcox formations. Other formations in this area produce brine but lack of sufficient data limits their identification.

THE determination of the source of a brine or water produced by an oil or gas well is of vital importance to the oil producer. Whether or not it is formation water or an upper water entering the well due to a faulty cement job or a leak in the casing has a very important bearing on the sort of reconditioning job required. In one case an attempt may be made to shut off bottom-hole water, in another case it will be required to recement the casing or otherwise stop the inflow of upper water.

The characteristics of the water from any particular formation may be determined by a precise chemical analysis. When a number of such analyses from a given formation in a particular area are available a comparative standard may be set up for the so-called typical formation water. In this discussion the term "water" is intended to include brine as well as fresh water and all data are from the Oklahoma City field.

Discussion of Methods of Analysis

For purposes of correlation there is required an accurate analysis of dissolved salts. The determination of free carbon dioxide, dissolved oxygen, iron and silica or other suspended matter has no material significance.

The method followed by this laboratory is that outlined by the U. S. Bureau of Mines Technical Paper 432, "A System of Analysis for Oil-Field Waters," by C. E. Reistle, Jr., and E. C. Lane and Technical Paper 404, "Identification of Oil-Field Waters by Chemical Analysis," by C. E. Reistle, Jr. Calcium, magnesium and sulfates are determined gravimetrically by standard wet analysis. Chlorides and bicarbonates are determined by titration. The alkali metals are calculated by the Stabler system of reaction values as outlined in the technical papers referred to above, making the positives and negatives balance. A calculation of the ions and radicals in terms of hypothetical combinations is not essential.

It is most important to maintain a high degree of accuracy. The procedure and operations should be standardized and conducted with a minimum of variations from one analysis to another. All equipment such as balance, analytical weights, volumetric glassware, etc., should be of high quality and maintained in good condition. All volumetric glassware such as pipettes, burettes, volumetric flasks, etc., should be checked by the U. S. Bureau of Standards. Standard solutions for volumetric titration must be carefully prepared and accurately standardized.

The report of the analysis includes all pertinent information relative to the sample such as reference number, producer's name, lease name, well number, depth, formation, date sampled, by whom sampled, and reason for requesting the analysis. The report of the actual analysis includes total solids, sodium and potassium, calcium, magnesium, chlorides, bicarbonates, sulfates, and specific gravity as of 60° F. These are expressed in terms of parts per million (p.p.m.) and also as per cent of the total dissolved solids. The following is an example of an actual analysis of a sample of water from the Oklahoma City field:

EXAMPLE 1

Well No. 1

Lease: XXX
Section: 34-12-3
County: Oklahoma
State: Oklahoma

Lab. No.: 14009
Depth water from 6,500 ft.
Formation: Wilcox
Date: January 29, 1941

Ion or radical—	Parts per million	Per cent
Total solids	200,414	100
Sodium and potassium	63,606	31.74
Calcium	11,181	5.58
Magnesium	1,943	0.97
Chlorides	123,285	61.51
Bicarbonates	101	0.05
Sulfates	298	0.15

Specific gravity, 1.1549.

Remarks: The analysis indicates that this brine is typical of the Wilcox formation.

When a number of such analyses of waters known to be from certain formations are tabulated and compared certain similarities will be noted, for instance in the study of Wilcox waters from the Oklahoma City field (see Table 1) it will be noted that the typical water from this formation carries some 200,000 p.p.m. total dissolved solids but this alone is not sufficient as an index for identification since the Arbuckle, Simpson, and Johnson formation waters are very similar in this respect. Differences will be noted in the calcium, magnesium, and sulfate content, expressed in terms of per cent of total dissolved solids and these percentage figures are the important indices used. Thus the typical Wilcox water from Oklahoma City can be expressed in this manner: Total dissolved solids, 200,000 p.p.m.; calcium, 5.66 per cent; magnesium, 0.96 per cent; sulfate, 0.15 per cent. It will be noted that no reference has been made to the alkali metals, chlorides, or bicarbonates as indices for purposes of correlation. Since sodium chloride constitutes the bulk of the dissolved solids in most brines it has been observed that the proportions of sodium (and potassium) and chlorides run fairly constant. Thus in most brines regardless of formation or locality the chloride content will be close to 61 per cent of the total dissolved solids and the sodium will be close to 31 per cent on the same basis. There are exceptions to this general rule, of course, but on the whole these proportions remain fairly constant.

Formation Data Necessary

For a comprehensive study of the formation waters from any given area there must be available information as to the existing formations, well-completion data, casing seatings, etc. In Oklahoma City, for instance, the deepest formation drilled is the Arbuckle lime—above that lie the lower Simpson, Johnson, School Land, Wilcox, upper Simpson, Prue, Tonkawa, Layton, Pawhuska and Cleveland. In most cases the casing is set in the upper Simpson or in the top section of the Wilcox. A few wells have been plugged back and perforated in the upper formations. Our knowledge of the waters from formations farther up in the hole is very limited since the wells in this field were drilled by rotary method and few if any samples of these upper waters have been obtained.

When a great number of analyses are available from an extensive field such as Oklahoma City, it is sometimes noted that in restricted areas the formation carries water peculiar to that particular area and slightly different from the major portion of the field. This is true of a small group of

TABLE 1—CORRELATION INDICES, OKLAHOMA CITY WILCOX FORMATION WATERS

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
8,269	208,541	5.62	0.95	0.14
13,726	196,018	5.60	0.97	0.16
8,296	200,900	5.65	0.95	0.15
10,945	196,905	5.62	0.97	0.14
11,304	196,673	5.63	0.94	0.14
9,826	202,603	5.66	0.94	0.14
12,809	203,771	5.59	0.95	0.14
13,447	198,452	5.70	0.97	0.15
5,787	202,595	5.65	0.95	0.15
12,939	201,312	5.70	0.96	0.15
13,763	198,067	5.56	0.94	0.15
10,946	201,957	5.60	0.97	0.14
6,417	198,995	5.68	0.97	0.14
4,119	199,059	5.69	0.96	0.18
9,824	195,886	5.61	0.94	0.14
12,812	203,110	5.61	0.97	0.16
13,781	200,466	5.62	0.96	0.15
10,952	199,300	5.64	0.98	0.14
13,226	198,182	5.70	0.96	0.15
14,009	200,414	5.58	0.97	0.15
13,779	199,837	5.67	0.96	0.14
10,941	199,164	5.57	0.97	0.16
Maximum	208,541	5.70	0.98	0.18
Minimum	195,886	5.56	0.94	0.14
Average	200,000	5.66	0.96	0.15

wells in Sections 2 and 3-11-3. A representative water from this area may be described as follows: Total dissolved solids, 203,000; calcium, 5.61; magnesium, 1.13; sulfates, 0.01.

It will be noted that the water from this small area differs from the typical Wilcox water from the major portion of the pool in the high magnesium content and the almost complete absence of sulfates.

This emphasizes the importance of knowing the exact location of the well before attempting to decide from the chemical analysis whether or not the sample represents true formation water.

Analysis of Simpson Water

The Simpson waters from the Oklahoma City pool are similar to the Wilcox in total dissolved solids. A representative Simpson water might be as follows (see Table 2): Total dissolved solids, 201,000; calcium, 6.35; magnesium, 1.17; sulfates, 0.09. Thus it will be observed that the distinguishing features are the higher magnesium and lower sulfates. These differences are very slight; for instance, in the Wilcox water the magnesium index is 0.96 per cent, while in the Simpson water the corresponding index is 1.17 per cent; but they are within the limits of accuracy of a precise chemical analysis. The lower Simpson is sometimes called the mixed zone and contains a number of strata, any one or all of which may produce water. There are Green shale, School Land sand, Hammer Handle sand, Johnson and the Stamper zone which lies directly above the Arbuckle.

Except for the Johnson formation, insufficient data are available to make a positive identification of these waters. It will be noted that there is a marked similarity between the Simpson and the Johnson waters while the water from the School Land sand may be distinguished from either of these although the two analyses on record are hardly sufficient to set a definite standard for this zone.

RECAPITULATION OF CORRELATION INDICES, OKLAHOMA CITY FORMATIONS

Tables 1 to 6, Inclusive

Table	Formation	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
1	Wilcox	200,000	5.66	0.96	0.15
2	Special Wilcox	203,000	5.61	1.13	0.01
3	Wilcox diluted with fresh water		5.60	0.97	0.15
4	Simpson	201,000	6.35	1.17	0.09
5	Arbuckle	197,000	6.12	1.13	0.14
6	Johnson	196,000	6.48	1.18	0.15

Description of Tabulated Data

The data that has been accumulated on waters from the Oklahoma City field have been classified and tabulated in the following tables which include total dissolved solids and correlation indices only.

Table 1.—Typical Wilcox water.
Table 2.—Typical formation water, Sec. 2 and 3-11-3.
Table 3.—Wilcox waters diluted with fresh water.
Table 4.—Simpson formation waters.
Table 5.—Arbuckle formation waters.
Table 6.—Johnson formation waters.
Table 7.—Miscellaneous formation waters.

Given a chemical analysis of an unknown sample and by comparison of that analysis with the standards set up for the different formation waters it is very easy to identify a true Wilcox water or a Wilcox water diluted with fresh water. It is more difficult to identify the unknown water if from some formation other than the Wilcox.

In the case of mixtures, it is very difficult to determine with certainty the sources of the water.

The following examples will illustrate:

EXAMPLE 2—ANALYSIS OF UNKNOWN SAMPLE TO DETERMINE THE SOURCE OF THE SAME

Well No. 4

Lease: XXX
Section: 34-12-3
County: Oklahoma
State: Oklahoma
Lab. No.: 13774
Depth: 6491 ft.
Formation: Wilcox

Radical—	Parts per million	Per cent
Total solids	202,465	100
Sodium and potassium	64,115	31.67
Calcium	11,452	5.65
Magnesium	1,941	0.96
Chlorides	124,528	61.51
Bicarbonates	134	0.07
Sulfates	295	0.14

Specific gravity, 1.1557.

The correlation indices contained in this analysis will be found to correspond so closely to those set up for the typical Wilcox water that there should be no hesitancy in judging it as such. The comparison follows:

Unknown sample	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
13,774	202,465	5.65	0.96	0.14
Wilcox std.	200,000	5.66	0.96	0.15

EXAMPLE 3—ANALYSIS OF UNKNOWN SAMPLE TO DETERMINE THE SOURCE OF THE SAME

Well No. 8

Lease: XXX
Section: 26-11-3
County: Oklahoma
State: Oklahoma
Lab. No.: 12907
Formation: Wilcox

Radical—	Parts per million	Per cent
Total solids	120,800	100
Sodium and potassium	37,219	30.81
Calcium	7,300	6.04
Magnesium	1,495	1.24
Chlorides	74,535	61.70
Bicarbonates	46	0.04
Sulfates	205	0.17

Specific gravity, 1.0888.

For purposes of comparison the indices contained in this analysis are tabulated against known standards.

Unknown sample	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
12,907	120,800	6.04	1.24	0.17
Typ. Wilcox	200,000	5.66	0.96	0.15
Typ. Simpson	200,000	6.16	1.14	0.10
Typ. Arbuckle	197,000	6.12	1.13	0.14

It is apparent that this sample is not a true formation water nor such a water diluted with fresh water. It is probably a mixture of formation water with some unidentified upper water, diluted with fresh water.

These examples illustrate the importance of accumulating and maintaining as complete a file as possible of analyses of waters from any given producing area. Every analysis of an unknown sample must be conducted with the greatest regard for accuracy and finally the correlation of the information developed by the analysis with the accepted standards must be carefully and critically made.

All the data presented in this paper pertain to the Oklahoma City field and could not be applied to waters from other fields.

Conclusions

A chemical analysis is a valuable aid in identifying formation waters.

Formation waters remain constant in chemical characteristics in given areas providing there is no encroachment by waters from other formations.

A high degree of precision is required in performing a chemical analysis of a water and a considerable background of experience is necessary correlating the information for purposes of identification.

TABLE 2—CORRELATION INDICES, OKLAHOMA CITY WILCOX WATERS, SECTION 2 AND 3-11-3

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
13,223	207,219	5.82	1.05	0.01
13,424	203,450	5.82	1.06	0.01
9,819	205,028	5.67	1.16	0.01
12,351	206,186	5.58	1.16	0.01
12,810	206,005	5.56	1.15	0.02
10,694	209,233	5.46	1.15	0.00
11,140	197,005	5.50	1.11	0.01
11,255	199,484	5.65	1.17	0.01
9,330	200,047	5.58	1.17	0.01
12,724	197,605	5.47	1.13	0.01
Maximum	209,233	5.82	1.17	0.02
Minimum	197,005	5.46	1.05	0.00
Average	203,000	5.61	1.13	0.01

TABLE 3—CORRELATION INDICES, OKLAHOMA CITY WILCOX FORMATION WATERS DILUTED WITH FRESH WATER

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
6,489	166,731	5.55	0.99	0.14
13,552	161,223	5.70	0.96	0.16
11,303	189,142	5.69	0.96	0.15
13,653	141,428	5.77	0.99	0.16
9,825	110,040	5.62	0.96	0.14
13,846	180,750	5.60	0.96	0.18
14,052	164,447	5.65	1.00	0.16
11,441	157,449	5.58	0.95	0.15
13,956	179,956	5.53	0.96	0.14
12,416	136,859	5.60	0.96	0.15
9,822	159,864	5.65	0.95	0.15
10,676	174,581	5.64	0.97	0.14
13,486	109,038	5.52	0.98	0.16
13,469	114,831	5.44	0.96	0.16
13,136	122,063	5.58	0.96	0.14
Maximum	.....	5.77	1.00	0.18
Minimum	.....	5.44	0.95	0.14
Average	.....	5.60	0.97	0.15

TABLE 4—CORRELATION INDICES, OKLAHOMA CITY SIMPSON FORMATION WATERS

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
6,579	201,926	6.44	1.16	0.10
6,607	199,412	6.56	1.17	0.10
12,811	201,527	6.41	1.18	0.11
9,958	204,270	5.62	1.17	0.02
11,288	199,244	6.49	1.19	0.11
6,608	199,690	6.57	1.17	0.12
Maximum	204,270	6.57	1.19	0.12
Minimum	199,244	5.62	1.16	0.02
Average	201,000	6.35	1.17	0.09

TABLE 5—CORRELATION INDICES, OKLAHOMA CITY ARBUCKLE FORMATION WATERS

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
4,323	194,260	6.18	1.12	0.14
4,260	193,020	6.16	1.13	1.14
13,770	198,698	6.04	1.12	0.13
13,771	198,655	6.10	1.12	0.13
4,258	193,810	6.36	1.17	0.14
4,257	193,558	6.07	1.14	0.14
4,324	194,329	6.01	1.10	0.14
2,104	205,916	5.91	1.12	0.14
Maximum	205,916	6.36	1.17	0.14
Minimum	193,020	5.91	1.10	0.13
Average	197,000	6.12	1.13	0.14

TABLE 6—CORRELATION INDICES, OKLAHOMA CITY JOHNSON FORMATION WATERS

Sample No.	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
4,239	187,531	6.29	1.11	0.17
4,259	194,428	6.08	1.13	0.15
4,035	195,550	6.38	1.17	0.13
13,769	199,453	6.07	1.12	0.13
4,036	197,253	6.67	1.17	0.16
4,211	195,113	6.65	1.21	0.13
4,212	105,976	6.64	1.20	0.15
4,034	197,608	6.66	1.19	0.15
4,237	197,704	6.73	1.18	0.13
4,238	199,399	6.65	1.20	0.12
4,240	195,081	6.84	1.22	0.12
4,207	195,527	6.51	1.18	0.14
4,208	195,230	6.32	1.18	0.16
4,209	198,711	6.37	1.16	0.15
4,210	195,582	6.36	1.19	0.15
Maximum	199,453	6.84	1.22	0.17
Minimum	187,531	6.08	1.11	0.12
Average	196,000	6.48	1.18	0.15

TABLE 7—CORRELATION INDICES, OKLAHOMA CITY MISCELLANEOUS FORMATION WATERS

Sample No.	Formation	Total solids p.p.m.	Calcium %	Magnesium %	Sulfates %
7,015	Cleveland	139,324	6.10	1.06	0.20
6,970	Cleveland	79,113	6.00	1.05	0.40
	Layton	204,957	6.10	0.98	0.02
C	Layton	241,605	5.93	0.98	0.01
G-1	Layton	235,046	5.86	1.00	nil.
13,768	Pawhuska	166,177	5.13	1.23	0.02
12,814	Pawhuska	170,018	5.24	1.22	0.02
11,857	Prue	138,988	8.51	1.13	0.01
	Tonkawa	197,282	5.12	1.36	0.01
4,025	Tonkawa	197,022	5.49	1.25	0.03
4,213	School land	197,529	6.73	1.21	0.17
4,214	School land	196,923	6.77	1.22	0.18

Complete Tedious Workover Job In Deep Well on Gulf Coast

By NEIL WILLIAMS

AN unusually tedious and exacting deep-well workover job involving an attempt to restore production from a horizon in which the well had ceased flowing prematurely due to salt-water head recently was completed by one of the major companies in the Old Ocean field, Brazoria County, Texas. Although the attempt was unsuccessful, efforts of the operators were rewarded when the well eventually was completed as a good producer in a slightly shallower deep sand.

The well originally was completed last January in a sand horizon topped at 10,132 ft., where 7-in. casing, cemented at 10,889 ft., was perforated. The hole had been drilled to a total depth of 10,990 ft. On potential gage the well flowed at the rate of 485 bbl. daily through a ¼-in. choke. Recoverable reserves of the well were estimated at that time to be around 250,000 bbl., but only 20,000 bbl. of this had been produced when the well went dead.

Type Rig Employed

The workover job was undertaken under contract by the American Well Servicing Co., Inc., of Houston, which started operations June 1. The rig, although comparatively light for regular operation in that field, was practically new and consisted of some of the most modern equipment. A regular 136-ft. steel derrick was used.

Included in the rig was a completely enclosed, streamlined draw works with 38-in. drum flanges, 36-in. water-circulating-type brake rings, 6-in. drum shaft, 8-in. dual full-wrap brakes, and jackshaft assembly giving eight speeds varying from 137 to 1,735 ft. per minute on single-line pull. It was powered by a 148-hp. gas-gasoline motor, equipped with water-cooled manifold, vaporproof magneto, fireproofing on the spark plugs and flame arrester on the exhaust.

A similar motor drove the 7½ by 12-in. power pump, which was mounted on an H-beam skid. The pump was equipped with a high-pressure shear relief valve and a 3,000-lb. mud-pressure gage. The standpipe was of high-pressure construction and having three valves, the main valve being a 4,000-lb. test 2½-in. full-opening plug valve. There was also a 4,000-lb. test valve coming off the side for the fillup line. This was a 2½-in. connection. In the same section of the standpipe there was a 1-in. connection, fitted with a 4,000-lb. test valve, used either as a connection for a mud pressure gage or for a water line.

In the assembly was a 32 by 20-in. triple sheave, roller-bearing block, with safety guards, having a capacity of 171,000 lb. In connection with this there was a 60-ton triplex hook with separate upper bails for elevator bails.

The swivel was of 4-in. size with a load capacity of 40-50 tons at 100 r.p.m. A 3½-in. by 32-ft. square kelly joint was used, and in the operations on this well 2½-in. tubing was used for pipe. This was handled through an 18½-20-in. rotary table. Accessories, such as the lighting system, also were of the most modern types. The entire assembly was highly unitized to facilitate moving and setting up.

Despite the medium heavy types of equipment, the assembly proved adaptable in handling the tools required in working over deep wells at Old Ocean.

Steps Taken in Job

In this job, a total of 34 trips was made. The first step after rigging up and mudding up the well was to pull the 2½-in. tubing, packer and screen, which had been set in the well during the original completion. This was handled without difficulty. A 5⅞-in. rock bit then was run in on 2½-in. tubing, on which trip cement in the bottom of the hole was drilled out to 10,166 ft.

Coming out of the hole on the first trip, a cementing tool then was run in to squeeze perforations at 10,132-42 ft. In this 100 sacks of cement were pumped, 2,000-lb. pressure being required to break through. Final pressure was 4,600 lb. Top of plug then was 10,125.55 ft.

A trip then was made with the rock bit and plug drilled out from 10,125.55 ft. to 10,143 ft. Following this a testing tool was run to test the bottom of the hole. The rock bit again was run, and the plug drilled out from 10,143 ft. to 10,153 ft., which was followed with a trip with the cementing tool to attempt another squeeze job. In this 25 sacks were pumped with final pressure 4,900 lb.

Allowing time for cement to set, rock bit again was run in. Cement plug top was found at 10,131 ft., and cement was drilled out to 10,138 ft., where a gun perforator was run, and the casing perforated for an attempt to retest the well. This occasioned a trip to set screen and liner, but due

Above: Coming out of hole with tubing on deep-well workover job in the Old Ocean field of Brazoria County, Texas Gulf Coast. Right: Power-driven mud-pump hookup used on the workover rig

to trouble in working the packer down it was necessary to come back out and rerun. Attempting to pull screen and liner, the string was backed off at the safety point, leaving 90 stands of thribbles and a single in the hole, top of the fish being 8,415 ft.

To recover this, two trips with an overshot were required, the first trip failing to come out with the fish. With the hole clean, a trip was made with the rock bit for circulating and conditioning mud. The screen and packer then were rerun. The well failed to respond to swabbing although it headed and kicked some wash water from the tubing, and screen again was pulled.

On the possibility that the sand might have been perforated too high, rock bit was run in for another trip, and the cement drilled out 2 ft. more to 10,140 ft. After perforating the additional depth, screen and packer were run again. This time the well swabbed salt water and a little oil, and screen was repulled.

Shutting Off Salt Water

To shut off the water it was considered advisable to perforate an additional section below those perforations and squeeze cement both above and below. Consequently, another trip was made with the rock bit, the cement drilled out 13 ft. more to 10,153 ft., and the perforator gun run at 10,150-53 ft.

Going in on another trip with a removable packer and cementing tool, which was set at 10,121 ft., perforations were squeezed with a maximum pressure of 5,000 lb. built up. Rock bit again was run in, and with top of plug found at 10,130 ft., cement was drilled out to 10,140 ft. for reperforation of the casing at that level. Two runs with perforator gun were made. It was planned to perforate at 10,132-39 ft. On the first run the line shorted out and only 2 ft. of the section was shot. A second attempt was necessary to shoot the remainder of the section.

This time, a testing tool was run rather than setting screen. The recovery was 5 stands of oil, mud and gas, 23 stands of salt water and 16 stands of water cushion. Another trip was made with a rock bit to circulate and condition mud following the drill-stem test, after which another trip was made with the cementing tool to squeeze the above perforations. Going in again with rock bit top cement was drilled out this time only to 10,138 ft. with a view to perforating above the water, and making a screen production test. Casing this time was perforated only at 10,132-37 ft., leaving out the bottom 2 ft. previously perforated.

Screen and packer were set but again the well swabbed salt water and a small amount of oil. In view of the possibility that the oil zone might have become sealed off by contamination, it was decided to treat the well with chemical to open the oil-zone perforations. This occasioned a trip with a removable packer. After treatment, a trip was made with the rock bit to clean out, wash the hole and circulate mud, following which screen and packer again were set. Again, the well swabbed largely salt water with only a small percentage of oil.

After these various unsuccessful attempts to recomplete the well in this 10,100-ft. sand, it was decided to go back up the hole to a 9,700-ft. sand, which had given indication of production. First, however, after pulling screen and packer, which dragged badly breaking off rubber and packing material into the bottom of the hole, it was necessary to go in with the rock bit to drill and wash out the junk. Cementing tool then was run and 17 sacks of cement squeezed, final pressure being 4,800 lb. Top of cement was found at 10,080 ft. Running rock bit again, mud was circulated and conditioned, after which the casing was perforated at 9,712-15 ft. On a trip with the testing tool, 2,500 ft. of water cushion, 100 ft. of mud, 6,720 ft. of oil and gas and 360 ft. of water were recovered, indicating good production, but it was believed perforations were a little low and that a higher section should be taken in. Consequently, another trip was made with the rock bit to circulate and condition mud, following which the cementing tool was set and 175 sacks of cement squeezed, at maximum pressure of 4,000 lb.

Going in hole again with rock bit, top of plug was found at 9,688 ft., and cement then was drilled out 18 ft. to 9,706 ft. Perforator gun was run and casing perforated at 9,692-9,704 ft., at which level the well was placed on production. The well was completed and rig moved off July 26, a total over-all time of 56 days having been spent on the well.

Throughout the operations 2½-in. tubing was used in going in and out of the hole. To stand in the 136-ft. derrick, this was broken down in thribbles. However, to avoid breaking at the same threads every trip, the practice was followed of rotating the thribbles. This was accomplished by breaking out a single to start on the first trip out of the hole, a double to start on the second trip, and a thribble to start on the third trip, repeating this cycle in each of the successive trips.

Of the 56 days over-all time on the well, approximately 12 days represented time waiting on cement to set. Repair to equipment and miscellaneous shutdowns, such as waiting on service, took the equivalent of approximately 3 days. A total of a little over 5 days was taken up in swabbing at various times, while the equivalent of another approximate 5 days was consumed in well shutdowns while watching the well during swabbing and testing operations. Going in and coming out of the hole on the 32 trips took up a total of approximately 17 days. The remainder of the time was consumed in miscellaneous operations such as making up connections, perforating, pumping cement, circulating and conditioning mud, making drill-stem tests, drilling cement, etc. Average time for coming out of the hole or going in the hole was from 6 to 8 hours.

A summary of operations shows that perforating guns were run and casing perforated eight different times, six of which were in the 10,130-ft. sand and two in the 9,700-ft. sand, in which the well finally was completed. Six different squeeze jobs were made. Screen and packer settings for production tests were made six different times, while three different drill-stem tests were made.

Heavy Tractor Hauled on Large Tandem Truck

TRANSPORTATION in the oil fields is very similar to the old fable wherein the blind man carried the lame man. So far there has been no single piece of equipment adapted to meeting all of the conditions encountered in oil-field hauling.

For hauling over paved highways and reasonably good roads, the large tandem trucks are very satisfactory. When going into boggy locations during wet weather, only a crawler-type tractor can do the job and sometimes even it gets stuck. For long hauls the heavy tractor is useless; in fact it cannot economically move itself over a very great distance.

The procedure in the field is to haul the tractor to the location on a large truck, unload it and then let it help the trucks get into and out of the location. During fair weather, when locations are in good condition, the same tractor, equipped with a scraping blade on the front, can be used for digging slush pits, building dikes, etc.

Both the tractors and the trucks used must be of the largest size available. A load of 30,000 lb. is not uncommonly placed on these trucks and the tractor must be equipped to pull the loaded truck through mud even when it has sunk beyond its axle. The winch is an essential item in the performance of this task. The particular type of tractor shown has seen considerable service in the present European war, being used mostly for cleaning up debris. The blade is used to fill in holes and the winch line to pull down partially wrecked buildings.

Equipment shown belongs to Markham Drilling Co. and is used in Illinois. The firm has both cable-tool spudding machines and rotary rigs and uses its own truck to move them on location. When not needed for pulling the trucks into the location, the tractor is employed in lighter work. In the picture, J. C. Mitchell, a member of the firm, is talking over the next job to be done with the driver of the truck and the swamper, who is also the driver of the tractor.

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Recent Developments have prompted extensive efforts on the part of the Petroleum Industry to assure utmost efficiency of equipment. And that greater care in the selection and use of each item finds Republic's Champion Rotary Drilling Hose still more of a favorite than ever before. Past performance has proved this rugged hose fully capable of the maximum serviceability so increasingly important today. Available with Full-Flow, leakless couplings. REPUBLIC RUBBER DIVISION OF LEE RUBBER AND TIRE CORPORATION, YOUNGSTOWN, OHIO.

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Left: Pumping jack on a West Virginia well. A time clock controls the operation for 2 hours each morning and afternoon. Right: Closeup of the gearmotor driving the pumping unit

Electric Pumping Units Gaining Favor in West Virginia Fields

By H. S. BRUBAKER
Monongahela West Penn Public Service Co.,
Fairmont, W. Va.

ELECTRICALLY driven pumping units for stripper wells requiring small horsepower input have been used in some areas for a number of years and are accepted as an excellent way to pump such wells. Extension of rural lines by utilities serving stripper-well areas will probably increase their acceptance by facilitating electrical connections.

This is particularly true in the northern area of West Virginia, which is served by the Monongahela West Penn Public Service Co., and its rapidly increasing rural extensions has given electricity to many rural areas in which are located numerous oil and gas wells.

There are quite a number of companies today making pumping units of various kinds, all designed to do a good pumping job. One of the simplest units uses V-belts for speed reduction from the motor to the main shaft of the reduction mechanism and the balance of the reduction being derived by the use of sprocket wheels and chains.

Use of Electric Generators

In a later development the entire reduction was a series of pinions and gears, but several years ago Westinghouse, Hart Brothers Machine Co. of Clarksburg, W. Va., and the writer developed a pumping unit using a Westinghouse gearmotor as the main speed reducer. A 1,750-r.p.m. 3-hp. single-phase motor with a shaft-speed output of about 97.5 r.p.m. was used as the motive power. This was further reduced by two sprockets and chains to the normal 20 r.p.m. which is the standard output of the average pumping unit. This has one advantage—by changing the sprocket sizes the output speed of the pumping unit can be increased or decreased above or below the 20 strokes per minute average. Some of these units have been in use for more than 2 years and the service has been extremely satisfactory, with no maintenance whatever on the mechanism, except lubrication.

Late in 1940 it was decided to build a pumping unit using a Westinghouse gearmotor for the complete reduction, doing away with all chains and sprockets. A 5-hp. gearmotor with an output speed of 17.5 r.p.m. was used. A crank was attached to the end of the main shaft to operate the pitman, which is connected to the walking beam. By means of various holes in the crank it is possible to get a 16, 21, or 26-in. stroke on the walking beam. The walking beam proper is a 10-in. X-beam about 15 ft. in length and is counterbalanced with iron or concrete weights to balance the upward and downward stroke of pumping operation. This unit has been in daily use for the past 7 months and the operation has been extremely satisfactory.

This particular electrical pumping unit has one advantage in that the operator can purchase the power unit and build his own pumping unit if necessary. This can be a well-built, elaborate unit, using roller bearings throughout, or it can be made with babbitt bearings and very simply constructed, as it is only necessary to weld or bolt the unit to a base and line up the crank with the walking beam in order to build a unit in the field. Most oil producers have a number of excellent welders normally employed who could easily build pumping units in their spare time.

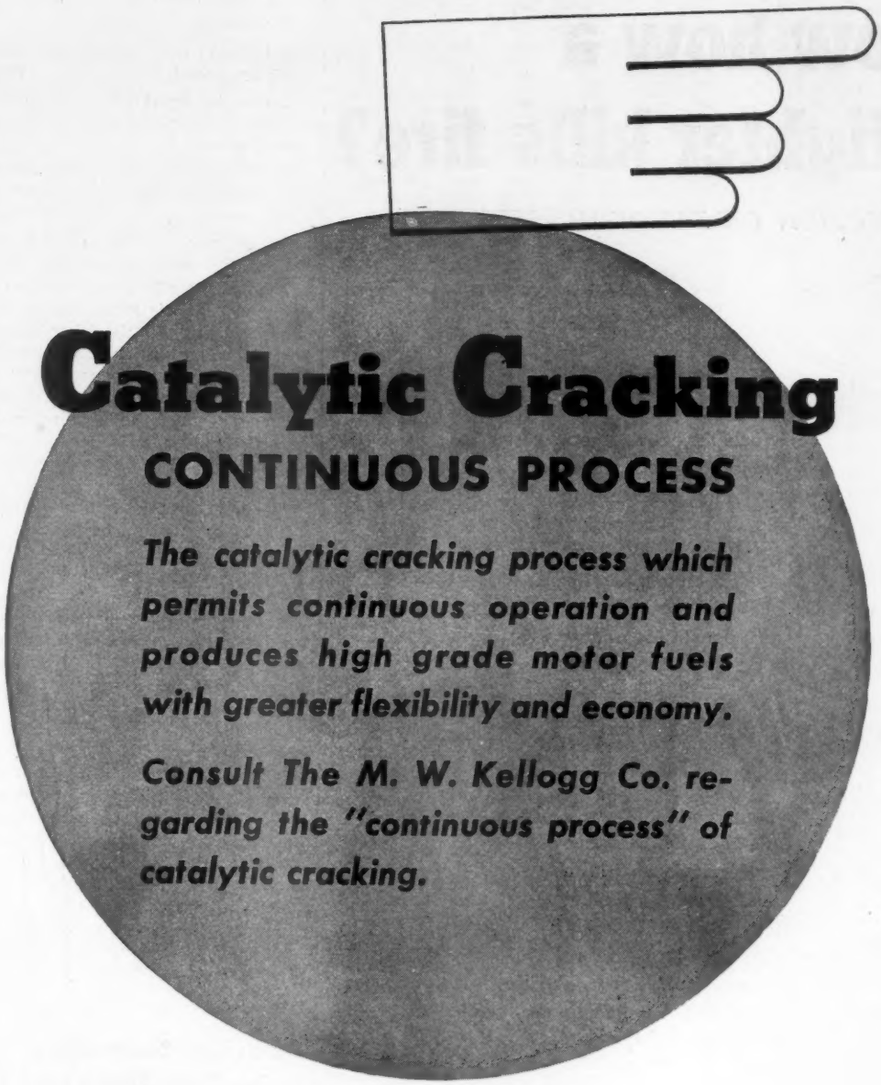
Electrically driven pumping units cost from $500 for 3-hp. unit to $725 for 5-hp. unit complete with magnetic switch, electric time switch, etc., for complete automatic operation. The electrical energy costs from $4 to $18 per month, depending upon the number of hours necessary to pump the well.

Standard Pumping Rigs

A standard pumping rig or derrick consisting of a 25-hp. gas engine belted to a band wheel through a reverse gear mechanism and with belt shaft attached to the walking beam, together with the derrick proper, represents an investment of about $2,000. It requires considerable maintenance and, of course, requires a man to operate the equipment. This unit is sufficient, not only to pump the well but to pull the strings of tubing, casing, and rods, but this may be required infrequently and, therefore, seems a waste of power when used for pumping only.

The most modern method of doing this work is to move the derrick away after the well has been drilled and use it at a new location, install the pumping unit at the well for pumping only and build a 40 or 50-ft. A-frame at the well which can be used for cleaning out and pulling. This can be done with a tractor or bailing machine mounted on a truck. Probably in many fields this will be the standard method of doing the job in the future.

Electric pumping units have many advantages over the older methods. Some of these are:



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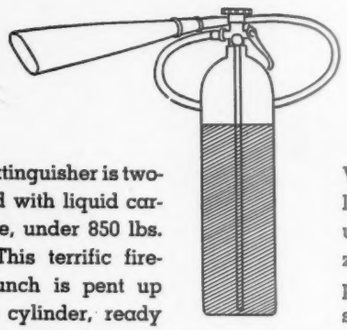
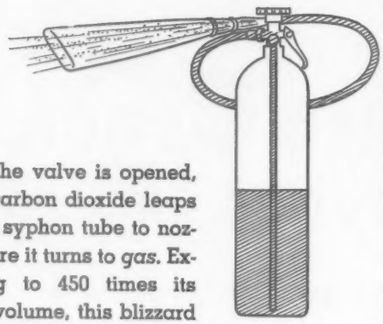
Do you know how a fire-fighter kills fire?

INSIDE INFORMATION ON EXTINGUISHERS



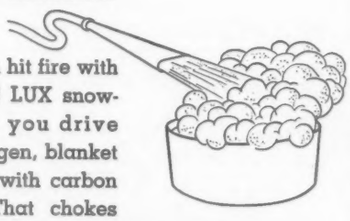
The LUX extinguisher is two-thirds filled with liquid carbon dioxide, under 850 lbs. pressure. This terrific fire-fighting punch is pent up within the cylinder, ready to batter fire the instant it is unleashed. Carbon dioxide will not deteriorate. Thus it requires no annual recharging.



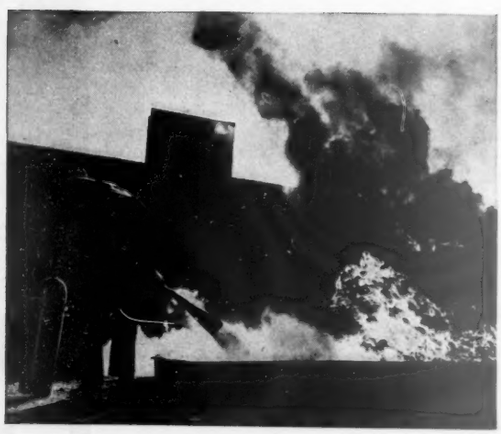
When the valve is opened, liquid carbon dioxide leaps up into syphon tube to nozzle where it turns to *gas*. Expanding to 450 times its stored volume, this blizzard of fire-killing carbon dioxide snow-and-gas, penetrates to every part of the fire area, smothering flame.

HOT DOPE ON FIRE FIGHTING

Physics books say any substance will burn, if heated in the presence of sufficient oxygen. Best way to kill oil fires is to remove oxygen. That's how a rug or blanket smothers some fires; that's how LUX fights blazes.



When you hit fire with a blast of LUX snow-and-gas, you drive away oxygen, blanket the blaze with carbon dioxide. That chokes flames. LUX carbon dioxide is a lightning-fast extinguishing agent, one of the fastest known to science.



SPLIT-SECOND EXTINGUISHING

LUX extinguishers pack a two-fisted wallop that snuffs out fire in a hurry. Wherever you have a fire hazard involving flammable liquids or electrical equipment, there's a LUX portable or a big LUX wheeled extinguisher, or a built-in LUX System that can handle it.

Do you have all the facts about LUX protection? Do you know about the small trigger-control 2- and 4-pounders? Have you considered fixed systems for your severe hazards? Mail the coupon. We'll send you a full report.

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4. Can be operated automatically with time switches and do not require attention more than once a week.
5. Conservation of natural gas which can be sold to gas companies or used for repressuring when necessary.
6. Require no cooling water in their operation, hence, no freezing troubles in winter.

The average oil-well pumper is paid about $125 per month and is given charge of from five to seven wells so that the labor items alone on gas-engine pumping is from $18 to $25 per month. With the present wage-and-hour law in effect, pumping is frequently limited to 40 hours a week and very few companies pump on Sundays; however, the automatic electric unit will pump 7 days per week which gives an increase in oil production.

In many locations it is advantageous to pump wells several times a day, thereby getting an increase in production. At several wells near Fairmont, W. Va., production by pumping three times a day has been two times the production of that secured by pumping once a day.

Electric pumping units are also being used in a number of locations in West Virginia to pump water out of gas wells by automatic operation once or several times a day. This has shown quite a saving to the gas companies, as considerable gas is lost if the water is bailed, which also requires a labor gang. There are quite a number of electric units now in use in the various oil fields of West Virginia and the number is rapidly growing. Probably the future will prove that it is advantageous for oil producers to pump their better wells with electric pumping units as against any other type of operation, as the wells are pumped at the same time each day, giving a maximum of production. Also a pumper can look after from 30 to 50 wells instead of from 5 to 7.

Oil-Burner Shipments 55 Per Cent Above Last Year

Shipments of oil burners from 159 manufacturers representing about 90 per cent of the producing capacity in the country totaled 32,685 units during June, an increase of 3,837 over May and 14,298 over the same month a year ago. Shipments for the first 6 months this year were raised to 134,806 units compared to 87,865 in the first half of 1940 and against 69,638 for the same period in 1939.

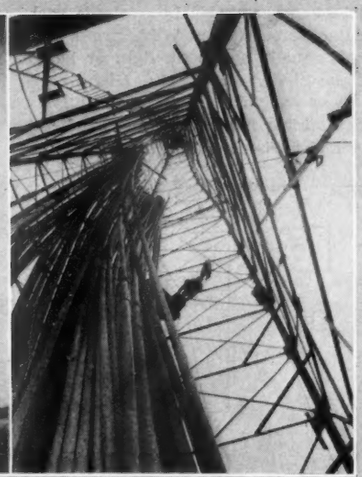
Figures on shipments are reported by the manufacturers to the Bureau of Census, Department of Commerce.

Statistics cover oil burners and burner units consuming fuel oil of Commercial Standard No. 1 grade, or heavier, used for application to central heating plants for homes, apartments, office buildings, churches, theaters, industrial process equipments such as heat-treating furnaces, industrial ovens, for generation of steam for power and other similar purposes.

Out of the total of 32,685 burners shipped during June, 23,192 were units for domestic service. Commercial and industrial units accounted for 2,897 of the assemblies shipped; boiler-burner units totaled 3,058 and furnace-burner units aggregated 3,538.

The increase of nearly 55 per cent in shipments of burners during the first 6 months this year over a year ago is one of the reasons for an increase of 22 per cent in the East Coast demand for fuel oil this winter. New England and Middle Atlantic states consume about 58 per cent of the burning oils used in the United States.

Battered- BUT NOT Bowed!



South Texas Blowout Again Proves Sound Design and Strength of Parkersburg Derricks

When this deep wildcat well blew out and caught fire recently, the Parkersburg Derrick, as graphically illustrated in the accompanying photographs, took an awful beating. Yet, had it not been for the extra measure of strength built into these sturdy derricks as a safeguard against just such an emergency, far greater damage to the drilling rig and possible loss of life would have been inevitable. So terrific was the gas pressure that the drill pipe was blown out of the hole and through the derrick. The rotary was blasted from its moorings and the traveling block flew to the top of the derrick, wrecked the crown block and lodged on a girt.

When the well bridged an hour later, the Parkersburg Derrick, with numerous bent braces and girts, was still standing . . . battered but not bowed!

For more than 40 years, Parkersburg has continually made valuable derrick improvements, which accounts for the fact that today Parkersburg Derricks are on the "approved list" of most operators who demand maximum quality and service.

Parkersburg leg joint construction assures a strong, rigid joint, proved by actual tests to be stronger than the calculated ultimate capacity of the derrick leg section.

THE PARKERSBURG RIG & REEL COMPANY

PARKERSBURG, W. VA.

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A-2-41

QUESTIONS ON TECHNOLOGY

Coal-Spray Oil

By W. L. NELSON, TECHNICAL EDITOR

We would like to have the required characteristics of a good coal-spray oil.—H. E. M.

The treatment of coal with oil and other petroleum products is the title of an excellent study by J. M. Pilcher and Ralph A. Sherman. This is published as Technical Report No. 6 (1939) of the Bituminous Coal Research, Inc., and was conducted in cooperation with the Standard Oil Co. of New Jersey, the Sun Oil Co. and the Viking Manufacturing Co. Copies of the report can be obtained from Bituminous Coal Research, Inc., 805 Southern Building, Washington, D. C.

The oils used in these tests are shown in Table 1 on this page. It should be noted that a wide variety of oils are used and that most of the oils have been refined to some extent—at least to the extent of exhibiting a low pour point and a high flash point. The oils are so high-boiling that they exert scarcely any vapor pressure. Thus, at storage temperatures, the vapor pressures multiplied by 100,000,000 of the first four light oils are only:

	At 40° F.	At 70° F.
Oil A	15	100
Oil B	4	30
Oil C	30	180
Oil D	55	300

Likewise, the boiling ranges of these oils at 10-mm. pressure extend from 230°-280° F. (initial boiling point) to 500°-600° F. (near end point). These data prove conclusively that danger of fire by vaporization of the oil is negligible (Sherman and Pilcher, "An Experimental Investigation of the Use of Oil for the Treatment of Coal," Transactions A.S.M.E., Vol. 60, No. 2, Feb. 1938). The Battelle Memorial Institute of Columbus, Ohio, has been active in the study of the spraying of coal with oil, and much of the following material is taken from their press releases.

Petroleum oils and blends of oil with wax and with asphalt are eminently suitable materials for the treatment of coal to allay dust, because the materials stick the fine pieces together so that they cannot fly about not only when first applied but over a long period of time. This insures that the coal that is dustless when it is put into the basement in summer or fall will still be dustless when the last shovelful is used in May, no matter how dry or how hot the basement may be.

To obtain the proper treatment with a minimum of expense and to obtain permanence of treatment, the proper type of oil must be used. This is not the same for all types of coals as was believed when oil was first used for the treatment of coal some years ago. Low-volatile coals, such as Pocahontas coals from West Virginia, are treated almost equally well with light or heavy, that is, low or high-viscosity, oils. High-volatile coals from West Virginia, Kentucky, and Pennsylvania, on the other hand, are somewhat better treated with higher-viscosity oils, and coals from

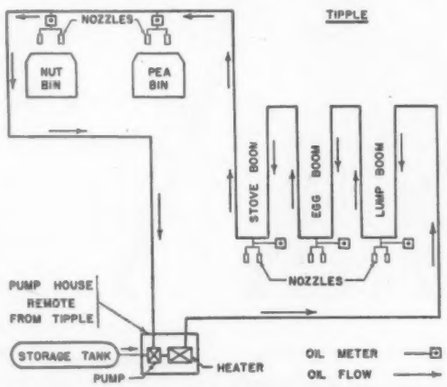


Fig. 1—Diagrammatic sketch of typical installation for treating coal with oil

Indiana, Illinois and the far West require heavy, highly viscous oils or blends of oil and wax, or of oil and asphalt.

The low-viscosity oils (100-200 viscosity) are applied both hot and cold. To atomize cold oil a pressure of about 350 lb. per sq. in. is required, whereas at 180° F. atomization may be accomplished at about 120 lb. Higher-viscosity oils (up to 600) require even greater pressures for atomization but they are sometimes more effective because they are not absorbed by the pores and cracks of the coal to as large an extent as the low-viscosity oils. The amount of oil required is proportional to the outside area of the pieces of coal. Thus, the smaller sizes of coal require more oil. This is indicated in Table 2.

To determine the dustiness, Pilcher and Sherman use the Powell and Russell (Ind. Eng. Chem., Anal. Ed., Sept. 15, 1933, p. 340) dustiness testing cabinet in which 50 lb. of coal are dropped from a height of 4 ft. in a closed box. The dust that settles on a polished metal plate in the first 2 minutes is called the coarse dust. It is the type of dust that settles in the basement near the coal bin. The dust that settles in the next 8 minutes is called the float dust; that is the dust that floats to the far corners of the basement and may reach the upper floors. Proper treatment of coal eliminates 80 to 95 per cent of the coarse dust and 95 to 99 per cent of the float dust.

TABLE 2—OIL REQUIRED TO PREVENT DUSTING

Size and type of coal	Approximate oil required per ton of coal*
48 mesh by ¼ in. Illinois No. 6 seam	6 qt. of 600 vis. oil or a medium to heavy blend (400-600 vis.) of oil with petrolatum or asphalt.
⅜ by 1¼ in. Pittsburgh seam	2 qt. of 200-vis. oil, or 1.5 qt. of 400 to 600-vis. oil.
⅜ by 1 in. Pittsburgh seam	3 qt. of 200-vis. oil.
⅜ by 1½ in. Island Creek seam	1 qt. of 200-vis. oil.
0 by 1½ in. Island Creek seam	6 qt. of 100-vis. oil, or 4 qt. of 200-vis. oil.
0 by ⅜ in. Island Creek seam	6 qt. of 200-vis. oil.
0 by 1¼ in. Pocahontas No. 3 seam	6 qt. of oil from 100 to 600 vis.
¼ by ⅝ in. Pocahontas No. 3 seam	4 qt. of oil from 100 to 600 vis.

*The amount of oil required per ton of prepared sizes will vary, depending upon the efficiency of removal of under-size in screening and the amount of breakage taking place after screening.

In addition to extensive data on the relation of the type and amount of oil to the reduction in dustiness for various types and sizes of coal which Report 6 gives in curves and tables, data are presented that show that the treatment of coal with oil has no appreciable effect on the performance of coals on residential underfeed stokers, that oil reduces the difficulty with freezing, that it reduces the retention of surface moisture on coal, and that it does not increase but may decrease the tendency of stored coal toward spontaneous heating.

The flow diagram of a typical system for treating coal with oil is shown on this page.

TABLE 1.—PROPERTIES OF OILS AND OTHER PETROLEUM PRODUCTS FOR SPRAYING COAL

Property—	Oil A	B	C	D	F	G	H	J	K	L	Petrolatum*	Heavy petrolatum blend	Light petrolatum blend	Oil asphalt blend†
Gravity, ° A.P.I.	19.7	21.5	23.3	22.1	17.1	17.6	20.7	19.5	19.1	20.7	30.8	22.2	24.5	19.4
Flash, open cup, °F.	325	340	305	325	365	300	350	355	365	355	515	365	310	350
Fire, °F.	360	390	340	360	445	340	380	400	420	380	.....	410	345	395
Saybolt Universal viscosity at 100° F., seconds	223	212	115	111	594	420	210	402	599	246	.....	622	220	402
Saybolt Universal viscosity at 210° F., seconds	43	43	39	38	57	49	43.4	50.6	57	45.2	95.6	58.4	46	52.9
Pour test, °F.	—30	—0	—0	—50	—5	—15	—20	—10	—10	—20	.....	80	50	—30
Conradson carbon, per cent	0.71	0.089	0.053	0.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sulfur, per cent	0.24	1.796	0.91	0.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oil-free wax content, Holde method, per cent	.....	.....	.....	.....	.....	.....	0.33	.068	0.79	0.75	57.2	13.2	11.5	.....

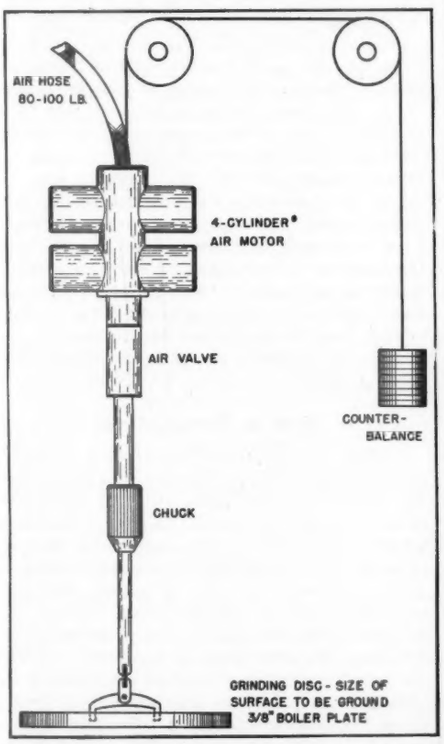
*A.S.T.M. melting point = 130.6° F. and cone penetration at 77° F. = 1.17 cm. †Consists of 10 per cent oxidized asphalt in 200-second viscosity oil.

Simple Grinder Is Used to Recondition Valve Seats

By E. W. NICHOLS

IN these times we must turn our minds to the repairing and reclaiming of the materials at hand. Stocks of used equipment exist in most larger refineries and field storehouses. An opportunity presents itself here in the reclamation of these stocks and no stock so admirably adapts itself to reclaiming.

Appreciable savings are often realized from reclaiming valves. However, this work requires skilled labor. Approximately 25 per cent of the valve's initial cost may be considered reasonable to be spent for the labor of repairing. The procedure of repairing the same valve over and over



Schematic drawing to show assembly of equipment for grinding flat surfaces in reclaiming refinery valves. Included are a suspended air motor, chuck, universal joint, and small keyed plate cut from boiler plate to hold gas oil-abrasive paste

again can go on so long as replacement parts can be obtained or until the casting itself becomes thin. The practice followed by one company which reconditions a large number of valves is briefly described here.

The assembly for grinding the valve seats and plates includes a four-cylinder air motor, a Jacob's chuck on the motor shaft and a universal joint to make a flexible connection with the key seats cut in the grinding disk. Grinding powder is sprinkled on the disk and moistened with gas oil. The plate is placed face downward on the ring of the valve and the motor started. Grinding continues until the gate is fitted perfectly into the valve.

There is, so far as is known, no tool which will effectively regrind valves of all types used in the refinery and the field. The pneumatic grinder mentioned here can be used on either the wedge gate or refinery valves with equal efficiency.

As a preliminary step in valve reconditioning, the heavy steel valves of the high-pressure refinery line should be inspected and calipered at frequent intervals. The valves should also be tested with a fluid pressure comparable to their original safety load test. By a rigid inspection their safety factor may be considerably increased.

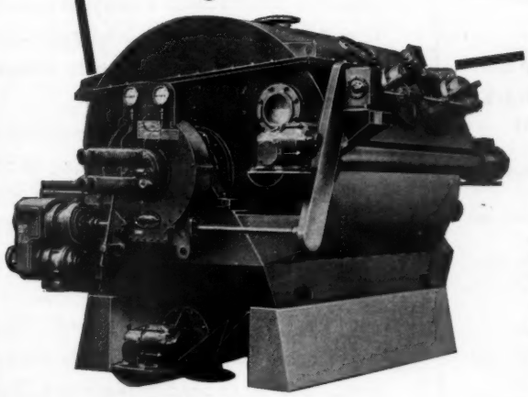
Aside from the labor factor in the reclamation department, there should be a system of cross-indexing of all valves, keeping their record and the life reasonably expected of them. The labor time may then be clocked sensibly against the most important group of valves. All valves should

MEMO TO THE MANAGEMENT

Have Your Development Department investigate the

OLIVER PRECOAT FILTER

It's a "trail blazing" filter

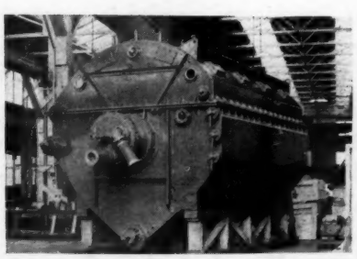


A few years ago, when the Oliver Precoat Filter was perfected, it had all the earmarks of being a boon to research and development departments. Today, operations with many large units on a variety of products and test work on other products bear out its promise as a "trail blazer."

Consider this. You can have either continuous vacuum or continuous pressure operation, with open or closed type for vacuum operation. You can get with this unit something you can't get with any other filter on the market, namely, continuous operation with the assurance of a clean filtering surface all the time. The surface of filter medium is completely restored at each revolution of the drum because the solids deposited are removed by a highly efficient shaving mechanism. You do not have to rely on "blow back" to remove sticky cakes from interstices of woven metal or fabric filter covers because the solids are not deposited on mediums of this type.

This unique operation gives a flexibility not available with any other filter—and we say this keeping in mind that we make a complete line of filters.

So, if you have any puzzling filtration or clarification problem which seems unsolvable, ask to have tests made with the Oliver Precoat.



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bear identification tags so that each may be checked in on a job and identified when returned. In this manner an accurate picture is available on the savings made by the repair job.

As to fittings, immediately after they come off the line, they should be run through the process of cleaning and oiling, threads and other parts inspected and returned to stock.

•

Toluene Manufactured From Oil During First World War

BECAUSE of war regulations, not a word was published about the plant at General Petroleum Corp.'s Vernon refinery which manufactured 200,000 gal. of toluene per month from California crude during the closing months of the first World War. As a result, it has sometimes been erroneously reported that the present manufacture of toluene from oil represents a new industry. To be sure, the process used in making toluene from oil in 1918 has been superseded by far more advanced methods, but the old process provided enough of the explosive base to lay a mine field from the Orkney Islands to Norway, thereby bottling up a large number of submarines.

In 1917 a legal official of General Petroleum Corp., on business in Washington, overheard naval officers mention the shortage of toluene. Remembering that years before he had been told by an engineer of the refining department that toluene could be manufactured from California crude, the official telegraphed for the engineer who had made the statement. As a direct result, S. J. Dickey, now president of General Petroleum Corp., was sent to California by the Ordnance Department to investigate possibilities and to supervise all work to be done. Mr. Dickey had been with United Gas Improvement Co. at Philadelphia and had taken part in small-scale manufacture of toluene from oil as a byproduct as early as 1915.

Plant at Vernon, Calif.

A plant was constructed at Vernon, at government expense, to be operated in conjunction with the Vernon refinery. Using distillate as charging stock, this plant turned out its first shipment of toluene on April 18, 1918. Shipments increased steadily so that the deliveries were being made at contract rate at the close of the war. The product, which was a nitration-grade toluene, was shipped to the Hercules powder plant in the San Francisco Bay area. There it was made into TNT for naval and military use. At the time of the armistice the plant was shut down, and since a process was later developed by which toluene could be made much cheaper, the old plant was wrecked in 1935.

The first time California oil had been used to manufacture toluene was in 1915 when Standard Oil Co. of California produced it as a byproduct at its Richmond refinery. This was reported in "Gasoline," a book written by Dr. Leslie, of Michigan University 10 years ago. The General Petroleum plant was the first installation designed for toluene as the intentional end product, and it was the largest plant ever to manufacture toluene from oil up to the time of the present emergency. However, if the war had continued it would have been superseded by a 2½-million gallon plant which was being installed at Standard Oil Co.'s Richmond refinery.

The normal peacetime supply of toluene is obtained from coke ovens. A plant to operate in conjunction with refining operations at Houston will double the normal output, and other plants for manufacturing toluene from oil are expected to begin operation during the coming months.

Pipe-Line Activity

Plantation Seeks Federal Aid to Obtain Right-of-Way

The office of Petroleum Coordinator Ickes has indicated that the land-condemnation powers of the recently enacted Cole bill might be invoked for the first time to obtain right-of-way, especially through Georgia, for the pipe line by which the Plantation Pipe Line Co. will transport petroleum products to the Atlantic seaboard states.

Plantation filed the first formal request for federal aid in obtaining such right-of-way for its 1,200-mile line from Baton Rouge, La., to Greensboro, N. C.

Deputy Petroleum Coordinator Ralph K. Davies subsequently issued a statement saying the line "is one the coordinator's office is especially desirous of having constructed as expeditiously as possible."

Mr. Davies said the line could be completed by late December if legal obstacles were removed.

Officials reported they were informed by company representatives that most of the materials needed for the line already were available, that construction contracts had been let, but that inability to procure certain portions of the right-of-way, especially in Georgia, was holding up progress. Accordingly, Plantation petitioned federal aid under the Cole Act.

Exercise of the eminent domain powers of the Cole Act would require a proclamation by President Roosevelt. This would declare the president's finding that the pipe line planned by the Plantation company was necessary for national defense and would set forth the terms and conditions under which the project would be constructed, operated and maintained.

Laying more than 2 miles of pipe a day will be the goal of crews due to start construction soon on the 1,261-mile pipe line.

The Plantation Pipe Line Co. is owned by Standard Oil Co. of New Jersey, Standard Oil Co. of Kentucky, and Shell Union Oil Corp. It goes from Baton Rouge to Greensboro, N. C., though it may be extended to Norfolk, Va.

Illinois Pipe-Line Systems Being Expanded

Construction is going forward on two projects of Illinois Pipe Line Co. to provide adequate facilities for moving crude oil. Between Albion and Centerville, Ill., the company is laying 10 miles of 12-in. And between Flat Rock and Stoy, Ill., 8 miles of 10-in. is being laid. Sheehan Pipe Line Construction Co. is the general contractor; H. C. Price Co. is doing the welding.

Texas Pipe Line Co. will start work as soon as pipe arrives for the construction of a 42-mile 6-in. crude-oil line from Salem to Benton, Ill. Contract has been awarded to Williams Brothers Corp. It is anticipated that work may be under way this month. The Benton area is being served at the present by Sohio Pipe Line Co. and Illinois Pipe Line Co.

International Line Changes Name to Texas

Dissolution of the International Pipe Line Co. was announced this week by the Texas Co. through articles of incorporation filed in Helena, Mont., by the successor company to be known as the Texas Pipe Line Co.

International Pipe Line Co. owns and operates the crude line from Cut Bank field to Sunburst, Mont., where the Texas Co.'s refinery is located. The entire plant was formerly known as the International. This name has been changed to the Texas Co. as a step to simplify corporate organization. No construction plans or other changes are contemplated, according to announcement of H. S. McCrea, superintendent, of Sunburst.

Texas-New Mexico Will Lay Line to Abell, Tex., Area

T. E. King Construction Co. of Hobbs, N. M., has been awarded contract for laying the Texas-New Mexico Pipe Line Co. pipe line and gathering system in the Abell pool of northern Pecos County, Texas. It will be a 19-mile 6-in. carrier from the Crane station in Crane County, Texas.

It also is planned to construct a 4-in. lateral to the Permian Abell pool, 4 miles east of the deep sector.

The line, announced in the spring, but delayed through lack of pipe, will carry crude from the two pools for the account of the Sinclair Prairie Oil Co., one of the owners of the Texas-New Mexico system.

The line will have a daily capacity of 6,000 bbl., and is scheduled to be in operation by September 15. Pipe has been made available for the carrier through the salvaging of an idle system.

Bids also are being received by the Texas-New Mexico company for the moving of two 80,000-bbl. storage tanks from Wink, in Winkler County, to the Crane station in Texas. The high-gravity oil will be segregated at the tanks and run to the coast in batches.

A pump station will be erected in the Abell pool.

The King firm also will take up idle lines in Lea County, New Mexico, and Ward County to use the pipe in the laying of the new line.

Plantation Pipe Line Co. Announces Names of Officers

Plantation Pipe Line Co. officers are as follows: C. R. Younts, president; F. E. Warterfield, vice president; N. J. McGaw, vice president, D. F. Cocks, secretary and treasurer; S. V. Vane, assistant secretary and assistant treasurer. The general office address has been announced as P.O. Box 1743, Atlanta, Ga.

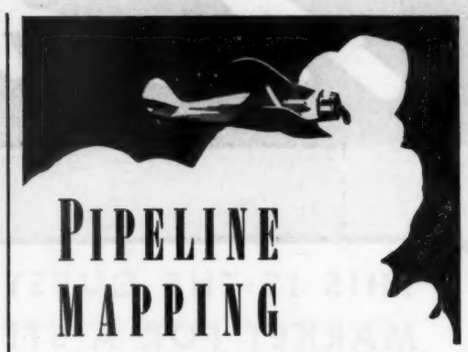
FPC Postpones Hearing United Gas Case

The Federal Power Commission has ordered the public hearing in the United Gas Pipe Line Co. case, originally scheduled for August 12, continued until 9:45 a.m. September 15, 1941. The hearing will be held in the civil-service examination room, Post Office Building, Hattiesburg Miss.

Petroleum Products Pipe Line Will Lay 40 Miles in New Mexico

Pipe-line outlet for the Hospah field in McKinley County, western New Mexico, is to be provided, according to articles of incorporation filed by the Petroleum Products Pipe Line Co. The line will be 40 miles of 6-in. and will be laid to refinery at railhead on the Santa Fe.

Production in the Hospah dome is developed by the Petroleum Products Refining Co., which operates a 600-bbl. skimming plant at Prewitt. N. M.



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FIELD REPLACEMENT

Location near West Liberty, Illinois. 113 complete 3½" Shrink Thread Tool Joints were replaced in 18 hours using two portable furnace outfits, by one welder and three helpers. Picture taken from nearby derrick top.

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THE NATIONAL

FIELD DEVELOPMENTS...

HIGHLIGHTS FROM THE WEEK'S NEWS—

Completions remain at a high level with 674 wells for the second week in succession. This figure, representing 95 completions per day, is slightly below the daily average of 102 wells reported in July (see pp. 98 and 99, this issue) but the current average may be increased by a number of wells in stripper areas which are not closely covered by weekly reports. Last month's completions, incidentally, were 540 more than in June and 539 more than in July 1940. The percentage of dry holes drilled in July was 23, as compared with 20 in June indicating more widespread exploration. The number of wells drilling at the end of July was slightly larger than at the end of June, indicating no change in the immediate future in drilling activity.

Much of the week's news is of routine character with the reporting of a number of extensions and discoveries but it is possible that the discovery of oil in the Clear Fork near Lubbock will prove to be another of the series that have raised the Permian basin into its present position of major importance. It also marks another step in the possible linking of West Texas with the older producing area to the east.

NORTHERN WEST TEXAS: The already immense producing area of the Permian basin appeared to be moved 35 miles northeast into Lubbock County. A wildcat 3½ miles northeast of the city of Lubbock, first reported as a dry hole, was swabbing 10 to 15 bbl. of oil an hour from a porous lime identified as the Clear Fork after acid treatment. Two deep wildcats were staked in the northern basin area and the Emma pool of Andrews County was extended southeast (p. 78).

EASTERN TEXAS: A new gas-distillate area south of Willow Springs in Gregg County was opened. Exploration was slowing down (p. 94).

CALIFORNIA: Crude-oil production was climbing in spite of the loss of markets through the embargo and the tanker transfers and operators were looking for effective production curbs. In the Los Angeles Basin the Dominguez extension was declining fast. A new depth record—11,150 ft.—was set for the Ventura Avenue field (p. 74).

WYOMING: Tensleep production on the Wertz dome, heretofore confined to Carbon County, was extended into Sweetwater County by the field's latest producer. Tensleep crude from Wertz is sought by purchasers as it is easier to handle in cold weather than some other grades (p. 82).

NORTH CENTRAL TEXAS: Three new pools were opened by an intense wildcatting campaign. Two were in Young County—one from Marble Falls and one from Caddo lime—and the third was a Mississippian lime pool in Clay County (p. 72).

OHIO: Three more deep tests were announced as the Noble County Oriskany test neared its objective (p. 68).

SOUTHERN WEST TEXAS: Two miles southwest of production in the Apco field, Pecos County, a wildcat was flowing an estimated 200 bbl. of oil a day from the Ellenburger lime while crews were fishing for a perforating gun. This extension was expected to throw some light on the question of whether the Olson & McCandless area is an extension of the Apco pool. Two deep strikes were in prospect for the Abell area (p. 78).

ILLINOIS: Operations continued to climb, reaching a new high for the year with 528 drilling wells, rigs standing or locations made. Hamilton County's recent discovery spurred activity in that area and Richland County was expecting a boom to follow two discoveries last week. The new South Woodlawn field continued to grow with completion of a good outpost well (p. 83).

SOUTHWEST TEXAS: Completion of a wildcat southwest of the town of George West is expected to encourage wildcatting along the Southwest Texas sector of the Wilcox trend, particularly for deep exploration. A new horizon was established at Washburn, and gas-distillate production was extended in the McAllen area (p. 87).

MONTANA: A new field was showing in Liberty County, 25 miles east of Kevin-Sunburst, from a sand believed to be the equivalent of the Cut Bank sand which produces in Montana's largest field (p. 82).

OKLAHOMA: Activity and wildcatting continued high in all areas, but the Cement field in the southwestern part of the state continued to hold interest with its expanding outlets and prospects for further development (p. 69).

MICHIGAN: Gulf Refining Co. established a new record for deep drilling east of the Mississippi (exclusive of the gulf states) when its Bay County test reached 10,257 ft. The St. Peter objective was expected within 50 ft. Another extension to the Reed City pool was showing, but in the state's other new area in Roscommon County, technicalities have slowed down drilling (p. 71).

NORTH LOUISIANA: Wildcatting held to its record pace along the Wilcox area. Five new tests were started and others were being planned. Some of the activity is due to lease requirements, but recent strikes are also responsible (p. 90).

ARKANSAS: McKamie was extended west and south with two gas-condensate producers. Geologic information released through the state Oil and Gas Commission indicated that Dorcheat will be extended to twice its present size, but will not join Macedonia (p. 90).

KANSAS: Discovery wells were completed in the far western part of the state in Kearny County, and in the extreme north-central section in Norton County. Russell County had a new pool, extensions were made to Ainsworth and Northwest Ainsworth and a Viola lime discovery was showing in western Sedgwick County (p. 66).

TEXAS GULF COAST: Early testing indicated a new horizon for the Texana area, Jackson County. The discovery well is northwest of the field opener and the two wells are believed to be separated by a faulted condition. The second well was completed at Oyster Bayou for 271 bbl. in 10 hours, pinched (p. 92).

LOUISIANA GULF COAST: The third new field this year was opened in the Delta area in Plaquemines Parish (p. 86).

SOUTHWEST PENNSYLVANIA: Reconditioning old wells and new drilling was getting under way as a result of the prevailing demand and price for Pennsylvania Grade crude. Some outpost drilling is also expected (p. 81).

COMPLETIONS IN ALL FIELDS . . .

(Week Ended August 16, 1941)

	Oil	Gas	Dry	Total	1941 total comp. to date	1940 total comp. to date
N. Y., Pa., and W. Va.	95	23	7	125	3,660	3,400
Ohio	4	15	7	26	1,011	953
Kentucky	4	0	3	7	398	331
Michigan	5	1	4	10	518	740
Indiana	7	0	4	11	322	226
Illinois	63	0	19	82	2,076	2,370
Kansas	45	1	17	63	1,356	1,163
Nebraska	2	0	0	2	61	18
Missouri, Iowa	0	0	0	0	25	26
Oklahoma	36	3	16	55	1,169	1,199
Texas:						
North Central Texas	41	0	11	52	1,643	1,830
West Texas	55	0	5	60	1,343	1,263
Texas Panhandle	17	0	0	17	374	382
Eastern Texas	15	0	5	20	673	353
Texas Gulf Coast	17	2	9	28	678	773
Southwest Texas	23	1	10	34	1,123	1,434
Total Texas	168	3	40	211	5,834	6,035
North Louisiana	10	2	2	14	406	381
Louisiana Gulf Coast	11	0	5	16	546	682
Total Louisiana	21	2	7	30	952	1,063
Arkansas	0	3	3	6	116	105
Mississippi and Southeast	5	0	0	5	155	131
Montana	3	0	1	4	164	136
Wyoming	4	3	1	8	116	102
Colorado, Utah	0	0	0	0	23	11
New Mexico	4	1	3	8	190	451
California	14	0	7	21	703	665
Total United States	480	55	139	674	18,849	19,129
Total previous week	468	62	144	674		
Week ended Aug. 17, 1940	419	50	136	605		

Norton and Kearny County Discoveries Are Completed

By ROBERT INGRAM

KANSAS wildcatters last week reported a number of successful tests. A new lower Lansing oil pool was opened in Russell County, and extensions were made to the Ainsworth and Northwest Ainsworth pools of Barton County while two important discovery wells—one in the northern part of the state in Norton County and the other in the extreme west in Kearny County—were completed. Other wildcats were showing (see below).

Northwestern Russell County appeared to have another new oil pool last week after Union Oil Co. of Wichita, Kans., George H. Snyder and V. D. Martin et al found pay in the Lansing-Kansas City lime at 2,937 ft. in 1 Otto Jennerich, W½ NW SE 13-21-15w. The pay zone was reported from 3,154-80 ft., and operators were running 7-in. casing for a completion test. The well is 5 miles east of the Fairport pool, nearest production, and opens the third new pool in as many weeks for Russell County.

SUMMARY OF COMPLETIONS

Kansas

	No.	Bbl.	Footage
Oil wells: Bemis-Shutts	3	3,565	10,384
Burnett	3	6,173	10,139
Coralena-Trapp	3	1,618	9,983
Hall-Gurney	3	1,278	8,917
Pawnee Rock	3	2,058	11,469
Silica district	2	3,320	6,645
Zenith	3	7,850	11,422
Other fields	24	24,276	75,359
Wildcats	2	360	9,440
Gas wells: McLouth	1	*13	1,620
Dry holes: Trapp	1	.....	3,395
Silica	1	.....	3,340
Other fields	9	.....	25,737
Wildcats	5	.....	15,922
Total	63	.....	203,772

Nebraska

	No.	Bbl.	Footage
Oil wells: Falls City	1	700	2,276
Shubert	1	90	2,335
Total	2	.....	4,611

*Million cu. ft.

The Northwest Ainsworth pool of northern Barton County was extended 1¼ miles northwestward during the week by John E. Mabee, Mabee Drilling Co., and W. O. Allen, all of Tulsa. Their 1-J Stoskopf, located in the NW cor. 29-16-13w, drew an initial potential of 50 bbl. of oil per day from a total depth of 3,390 ft. in the Arbuckle dolomite.

W. N. Bartlett and Loren A. Crum 1 Wondra, located in the SE NE NE 5-17-13w, extended Arbuckle dolomite production in the Ainsworth pool of Barton County ⅝ mile southwestward during the week. The outpost made 5 bbl. of oil and no water per hour on initial tests from Arbuckle dolomite topped at 3,357' ft. and penetrated at 3,361 ft.

Viola Lime Pool Showing In Western Sedgwick County

Western Sedgwick County claimed field interest during the week after a semiwildcat 3 miles southwest of the abandoned Cheney (Viola lime) pool logged saturation in the Viola lime objective.

Walter S. Fees, Iola, 1 Hall estate, in the C N½ NE SW 30-27-4w, topped the Viola lime at 4,106 ft., ran core barrel and on core cut from 4,111 to 4,114 ft. recovered 2 ft. carrying some oil saturation. Crews set and cemented casing on top of the Viola lime. The well was due to be drilled in over the week end.

It is 3 miles south and west of Derby Oil Co. 1 Bartholomew, in the SW SW NW 8-27-4w, a discovery of November, 1935, which produced 5,600 bbl. of 38-gravity oil before abandonment was brought about by water encroachment.

The prospect is situated on a core-drilled structure originally mapped by Magnolia Petroleum Co.

Norton County Discovery Completed After Several Weeks' Testing

Norton County gained a new Lansing pool during the week in Phillips Petroleum Co. and Helmerich & Payne, Inc., 1 Hewitt, S½ SE SE 11-4s-21w, which made 272 bbl. of oil per day, on retest potential. Originally, the discovery topped the Arbuckle dolomite at 3,655 ft., topped pre-Cambrian granite at 3,746 ft., and drilled 4 ft. into the granite before plugging back to 3,404 ft. in the Lansing series. Earlier swabbing tests made 65 bbl. of 36.8-gravity oil in 19 hours with a small amount of water. Later, the well swabbed 131 bbl. of oil and 87 bbl. water after acidization in 14 hours. Shut down for 12 hours, oil rose 450 ft. in the hole with 1,850 ft. of water. Operators squeezed with 150 sacks, and acidized at 3,407 ft. to get a water shutoff.

AVERAGE DAILY PRODUCTION

LEADING KANSAS FIELDS

	Aug. 16	Aug. 9
Augusta	1,200	1,150
Bemis-Shutts	11,750	9,950
Bloomer	6,500	5,250
Burnett	12,050	9,800
Burrton	7,150	7,000
Chase	6,400	5,050
Elbing	950	900
El Dorado-Towanda	7,200	7,150
Geneseo	7,450	4,100
Graber	3,000	2,600
Greenwood County	9,100	9,050
Hollow-Nikkel	1,450	1,400
Keesling-Midway	1,450	1,050
Lerado	750	650
Lorraine	1,350	1,500
Oxford	650	650
Rainbow Bend	850	800
Raymond	1,350	850
Ritz-Canton	3,850	3,800
Trapp	21,450	22,500
Balance Russell County	27,850	25,200
Sedgwick County	3,250	3,100
Silica	21,000	17,150
Voshell	1,650	1,650
Wellington	950	900
Wherry	2,000	2,050
Zenith	9,750	9,550
Others	78,350	70,450
Total Kansas	250,700	225,250

KANSAS COMPLETIONS

Wildcats

Ingling-Parker 1 Merkle ..... NE SW 1-20-9w Dry, T.D. 3,009 ft., Lansing 2,900 ft., show gas 2,989-3,000 ft., Rice County.

Central 1 Harbaugh ..... NW NW NW 21-14-12w Dry, T.D. 3,289 ft., Arbuckle 3,274 ft., Russell County.

Barwick & Davis 1 Shrader....S½ SE SE 21-12-14w Dry, T.D. 3,291 ft., Arbuckle 3,261 ft., Russell County.

Hamilton & Hawkins 1 Ward .. NE NE SW 15-23-13w Dry, T.D. 3,830 ft., some show oil in Arbuckle 3,810 ft., Stafford County.

Meinholdt & Edwards 1 Stanley..NW NE NW 3-14-21e Dry, T.D. 2,503 ft., Arbuckle 1,716 ft., granite 2,463 ft., Douglas County.

Stanolind 1 Patterson ..... E½ SE SE 23-22-38w Swabbed 88 bbl., Cherokee 4,420 ft., top sand 4,740 ft., base sand 4,751 ft., T.D. 5,690 ft., P.B. 4,784½ ft., *pool opener*, Kearny County.

Helmerich & Payne 1 Hewitt .... S½ SE NE 11-4-21w Potential 272 bbl., Lansing, T.D. 3,750 ft., P.B. 3,404 ft., acid 3,407 ft., *opens Hewitt pool*, Norton County.

Fields

Abbyville, Reno County: Skelly 4 L. A. Smith, 180 bbl., Kansas City lime, T.D. 3,545 ft.

Northwest Ainsworth, Barton County: Mabee 1 Stoskopf, NW NW 29-16-13w, 50 bbl., Arbuckle, T.D. 3,390 ft.

Beaver-Shallow, Barton County: Martin & Hearing 4 Feltes, SE SW SE 8-16-12w, 58 bbl., Topeka, T.D. 2,895 ft.

Bedford, Stafford County: Texas 2 Gardes, SE NE SW 28-23-12w, 1,772 bbl., Arbuckle, T.D. 3,858 ft.

Bemis, Ellis County: Cities Service 8-B Colahan, NW SE NE 25-11-17w, 289 bbl., Arbuckle, T.D. 3,378 ft., acid.

Cities Service 7-B Colahan, SW NW SW 25-11-17w, 3,000 bbl., Arbuckle, acid, T.D. 3,516 ft.

Big Creek, Russell County: Sherman & Smith 1 Neidenthal, S½ SW NE 23-14-15w, 53 bbl., Gorham, T.D. 3,182 ft.

East Big Creek, Russell County: Shaffer 2 Voufeldt, E½ SE NW 6-15-14w, 60 bbl., Kansas City lime, acid, T.D. 2,957 ft.

South Big Creek, Russell County: Cummings 1 Mudd, S½ SW NE 6-15-14w, 48 bbl., Arbuckle, T.D. 3,181 ft.

Burnett, Ellis County: Dickey 6-C Carmichael, W½ NE NW 17-11-17w, 3,000 bbl., Arbuckle, acid, T.D. 3,375 ft.

Shell 2 Dean, SW NE NE 14-11-18w, 3,000 bbl., Arbuckle, acid, T.D. 3,375 ft.

Dickey 7 Houston, W½ SE SE 18-11-17w, 173 bbl., Arbuckle, acid, T.D. 3,389 ft.

Southwest Catherine, Ellis County: Lion 1 Miller, S½ SE SW 17-13-17w, dry, T.D. 3,373 ft.

Coralena, Russell County: Continental 11 Meharg, 17-15-13w, 69 bbl., Arbuckle, T.D. 3,282 ft.

Couch, Cowley County: Ryan 4 Kennedy, NW SE SW 12-30-5e, 882 bbl., Bartlesville, T.D. 2,830 ft.

Doran, Rice County: Phillips 1 Kate, S½ SE NW 18-19-10w, swabbed 54 bbl., Arbuckle, T.D. 3,278 ft.

Dubuque, Russell County: Luther Mackall 1-B Klusener, SE NE SW 27-15-12w, 291 bbl., Kansas City lime, T.D. 3,207 ft.

Edwards, Ellsworth County: Continental 8 Fuller, 28-17-8w, 3,000 bbl., Arbuckle, acid, T.D. 3,220 ft.

Frog Hollow, Cowley County: Leader 8 Moon, SW SW 16-32-5w, 1,260 bbl., Bartlesville, T.D. 3,080 ft.

Gibson, Cowley County: Sinclair Prairie 1 Shurtz, SW NW NE 29-34-3e, 389 bbl., Bartlesville, T.D. 3,391 ft.

Gorham, Russell County: Central 3-A Roubach, S½ NE NE 15-14-15w, 413 bbl., Gorham, T.D. 3,265 ft.

Greenvale, Russell County: Stanolind 1 Major, SE NE 4-15-12w, 3,000 bbl., Gorham, T.D. 3,257 ft.

Hall-Gurney, Russell County: J. J. Hall 26-D Miller, N½ NW SW 30-14-13w, swabbed 65 bbl., Kansas City lime, T.D. 2,925 ft.

Skelly 17 Opdycke, W½ SW NW 32-14-13w, 457 bbl., Kansas City lime, T.D. 2,934 ft.

Cities Service 4-B Ebel, NW SW SW 24-14-4w, 756 bbl., Kansas City lime, T.D. 3,058 ft.

Karber, Barton County: Bishop 1 Johanning, E½ SE NE 12-19-11w, dry, T.D. 3,370 ft.

West Kraft, Barton County: Black-Marshall 1 Schneweiss-A, S½ NE SE 7-17-11w, dry, T.D. 3,399 ft.

Max, Stafford County: Stanolind 2 Helmers, N½ SW SW 1-22-12w, dry, T.D. 3,638 ft.

McLouth, Leavenworth County: J. B. Richard 1 Kate Sherman, NE NE 6-10-20e, 13,000,000 cu. ft. gas, Bartlesville, T.D. 1,620 ft.

Magnolia 1 G. A. Kell, NE SE 4-10-20e, dry, T.D. 1,643 ft.

Orth, Rice County: W. N. Bartlett 1 Boldt, W½ SW SE 22-18-10w, 342 bbl., Topeka, T.D. 2,700 ft.

Pawnee Rock, Pawnee County: British American 1 N. Belt, SE NW 13-20-16w, 730 bbl., Arbuckle acid, T.D. 3,813 ft.

Stanolind 1-B G. P. Smith, S½ NE NE 13-20-16w swabbed 116 bbl., Arbuckle, acid, T.D. 3,825 ft.

Mid-Continent 2 Bixby, NW NE NW 24-20-16w, 1,212 bbl., Arbuckle, T.D. 3,831 ft.

Prusa, Barton County: Gulf 2 Riemann, NW NE SE 33-16-11w, 68 bbl., Arbuckle, acid, T.D. 3,356 ft.

Raymond, Rice County: Hyde & Stormfeltz 2 Graham, E½ NW SE 16-20-10w, 2,410 bbl., Kansas City lime, acid, T.D. 3,145 ft.

Vickers 3-B Bayer, W½ NW NW 20-20-10w, 786 bbl., Lansing-Kansas City, acid, T.D. 3,202 ft.

Vickers 2-A Bayer, W½ SE NW 20-20-10w, 469 bbl., Arbuckle, acid, T.D. 3,290 ft.

Riley, Stafford County: Shell and Atlantic 1 Hildebrand-A, NE NW NW 33-23-11w, dry, T.D. 3,762 ft.

Rock, Cowley County: Stelbar 1 Wilson, W½ NW SE 11-30-4e, 143 bbl., Bartlesville, T.D. 2,744 ft.

Stelbar 2-A Joslin, S½ SW NE 21-30-4e, 440 bbl., Bartlesville 2,796-2,824 ft., T.D. 2,825 ft.

Shutts, Ellis County: Phillips 1 Kessler, SE SE 32-11-17w, 276 bbl., Arbuckle, acid, T.D. 3,490 ft.

Silica, Barton County: Falcon Seaboard 1 Buchart, N½ SE NE 14-20-11w, dry, T.D. 3,340 ft.

West Silica, Barton County: C. E. Ash 2-B Schartz, E½ SE SW 7-20-11w, 3,000 bbl., Arbuckle, T.D. 3,319 ft.

Texas 3 Koch, N½ NW SW 7-20-11w, 320 bbl., Arbuckle, T.D. 3,326 ft.

St. John, Stafford County: Cities Service 5 Benton, S½ NW SW 23-24-13w, dry, T.D. 4,160 ft.

Susank, Barton County: Bartlett 1 Wondra, S½ SE NE 5-17-13w, 96 bbl., Arbuckle, T.D. 3,361 ft.

Trapp, Russell County: Shell 8-A Batt, N½ SE SE 35-15-14w, 1,500 bbl., Arbuckle, acid, T.D. 3,342 ft.

Wakefield 2 Sauson, NE SW SW 12-17-14w, swabbed 49 bbl., Arbuckle, T.D. 3,359 ft.

Anderson-Prichard 1 Michaelis, W½ NW SE 27-15-14w, dry, T.D. 3,395 ft.

Zenith, Stafford County: Porter 3 Richardson, N½ S½ SW 10-24-11w, 3,000 bbl., Viola, acid, T.D. 3,821 ft.

Stanolind 6 Hartnett, SE NE NW 13-24-11w, 3,000 bbl., Misener, acid, T.D. 3,811 ft.

Champlin 2 Figger, E½ NE NE 9-24-11w, 1,850 bbl., Viola, acid, T.D. 3,790 ft.

Miscellaneous

Butler County: National Refining 1 Newby, SW SW SW 16-26-7e, dry, T.D. 3,223 ft.

Greenwood County: Bay 1 Ellingston, SW SW SE 8-28-11e, dry, T.D. 1,273 ft.

Katz 2 Christy-A, W½ SE NE 12-26-9e, 12 bbl., Kansas City lime 1,370-1,400 ft., T.D. 2,200 ft., P.B. 1,400 ft.

Woodson County: Charles Havlik 1-A Woolner, E½ E½ NE NE 33-25-14e, dry, T.D. 1,534 ft.

WILDCAT DRILLING REPORT

Western Kansas

Barber County: Pryor & Lockhart 1 Ishmael, S½ SE SW 35-34-11w, Arbuckle 5,339-54 ft., P.B. 4,727 ft., 2,000 ft. fluid in hole, swabbed 4 to 5 bbl. water per hr. for 8 hr., scum oil.

Deep Rock 1 Skinner, W½ NW SW 21-31-14w, lost circulation 975 ft.

Barton County: Helmerich & Payne 1 Unruh, E½ NE NW 16-20-15w, Arbuckle 3,720 ft., 5-in. 3,724 ft., standard tools 3,739 ft., shot 3,780-3,805 ft., est. 10 bbl. oil a day and 1,500,000 cu. ft. gas, T.D. 3,872 ft., P.B. 3,854 ft., 1,582,000 cu. ft. gas, P.B. 3,840 ft., 1,800,000 cu. ft. gas, flowed 7 bbl. oil and no water per day.

Shields 1-A Kimpler, W½ NW NE 31-18-11w, Lansing 3,145 ft., drilling 3,250 ft.

W. O. Allen 1 Stoskopf, NW NW NW 29-16-13w, Arbuckle 3,373-75 ft., show oil, 5-in. 3,374 ft. at 3,386 ft., 60 ft. oil in hole in 12 hr., est. ½ bbl. oil a day, T.D. 3,390 ft., 1,700 ft. oil in hole in 16 hr.

Bartlett 1 Wondra, SE NE NE 5-17-13w, Arbuckle 3,357 ft., cored saturation 3,359-61 ft., 5-in. 3,358 ft., standard tools 3,361 ft., 850 ft. oil in hole in 5 hr., swabbed 5 bbl. oil an hr., acid, cleaning out.
Lebow & Gussman 1 Schrepel, E½ NE SE 26-20-12w, first report.
Cowley County: Mead Production 1 McMichael, NW SW SW 35-33-3e, 6-in. 3,065 ft., drilling 3,270 ft.
Steinbuchel 1 Peck, N½ NW SE 23-34-5e, drilling 1,710 ft.
Deep Rock 1 Daniels, SW SW NE 10-30-3e, Arbuckle 2,934-68 ft., acid, testing.
Palmer & Continental 1 Defore, SE SW SE 23-30-3e, drilling 100 ft.
Edwards County: Continental 1 Beatty, S½ SW 35-25-20w, drilling 4,760 ft.
Elk County: Allison 1 Porter, NW NE NW 25-28-8e, Arbuckle 2,915-19 ft., bailed 2 bbl. oil an hr.
McPherson 1 Clogson, SW SE SE 21-28-11e, Lansing 712 ft., 6-in. 901 ft., drilling 920 ft.
Ellis County: Darby 1 Dreiling, SE SE NW 28-13-17w, Arbuckle 3,521 ft., 7-in. 3,521 ft., perf. 3,285-94 ft., acid, bailed 1 bbl. water and 1½ gal. oil, more acid, pumped 2⅔ bbl. fluid an hr., cement perf., drilling cement.
Darby 1 Giebler, E½ NW SE 27-13-20w, drilling 3,490 ft.
Greenwood County: G. A. Fuller 1 Baker, E½ NE SW 17-26-13e, Oswego 1,083 ft., drilling 1,163 ft.
C. T. Welch 1 Crawford, NE SE SE 17-28-12e, 250,000 cu. ft. gas 267-300 ft., 8-in. 328 ft., 6-in. 1,020 ft., show oil and gas 1,020-30 ft., S.D.
Jack Ray 1 Mitchell, SW NW NE 29-27-12e, S.D. 740 ft.
Riggs & Herbert 1 Forbes, SW NW NW 20-27-11e, drilling 530 ft.
Marion County: Basinger 1 Janseen, NE NE SE 9-21-3e, 10-in. 1,050 ft.
Rex & Morris 1-A Cowman, S½ SE NW 12-17-4e, first report.
Roscoe Mendelhall 1 Holob, SE SE SW 28-18-4e, first report.
McPherson County: Kiowa 1 Reusser, S½ SE SE 26-21-2w, Mississippian lime 2,983 ft., drilling 3,302 ft.
Helmerich & Payne 1 Wyatt, E½ NE NE 20-1-23w, Lansing 3,325 ft., show oil 3,321-28 ft., 3,365-69 ft. and 3,375-79 ft., slight stain 3,380-85 ft., live oil 3,385-90 ft., granite 3,610-15 ft., 5-in. 3,439 ft.
Cities Service 1 Boucher, NE NE NE 13-4-23w, drilling 2,850 ft.
Pawnee County: Max Cohen 1 English, SW SW NE 1-21-15w, anhydrite 864 ft., drilling 2,600 ft.
Pratt County: Pryor & Lockhart 1 Bergner, NE NE NE 35-29-14w, anhydrite 778 ft., Fort Riley 2,330 ft., Florence 2,430 ft., drilling 3,065 ft.
Skelly 1 Ganaway, E½ NE SE 30-28-12w, drilling 2,225 ft.
Central 1 Ward, E½ SE NW 11-26-12w, first report.

(Continued on Page 95)

Deepening Program at Falls City Results in Another Good Well

ST. JOSEPH, Mo., Aug. 18.—Another good producer was completed last week from what first appeared to be a failure in the Falls City pool. Skelly Oil Co. deepened 4 Wallraff to the lower Hunton lime and at last report it was good for 80 bbl. of oil per hour. It was indicated in Skelly circles that other company wells would be deepened. Originally the well had been too small to operate.

E. C. Winters has a new producer in the Falls City pool, his second. R. L. Campbell of St. Joseph and his associates are drilling 5 Schock. The Ohio Oil Co. is drilling 7 Bucholz and expects to drill No. 8 soon.

Nebraska Plugging Law To Be Enforced

Nebraska's first oil conservation law becomes effective August 24 and operators in the Falls City pool of Richardson County are being advised of regulations and penalties. The law applies to plugging of wells and violators are subject to a $500 fine or 6 months in jail or both. Enforcement is to be handled by the state geologist. Rigid regulations have been drawn to provide for complete shutoff of all formations showing water of any kind.

NEBRASKA COMPLETIONS

Falls City, Richardson County: E. C. Winters 2 Boice, NW NW NE 18-1n-16e, est. 700 bbl., Hunton lime 2,273 ft., T.D. 2,276 ft., acid.
Skelly Oil Co. 4 Wallraff, NE SW 20-1n-16e, old well deepened Hunton 2,210 ft., T.D. approximately 2,300 ft., flowed 80 bbl. oil an hr.
Shubert pool, Richardson County: Black Gold Operating Co. 1 J. J. Parsons, SW SW 30-3n-16e, Hunton lime 2,535½ ft., 70-90 bbl.

NEBRASKA DRILLING REPORT

Furnas County: Trickett 1 Gossic, NW NW NW 33-2-21w, cleaning out 1,390 ft.
Gage County: Bee Dee Oil 1 Bankers Life, NW NW SW 16-3n-5e, drilling 50 ft.
Harlan County: Veeder Supply & West 1 Battin, N½ SE NW 15-2n-18w, 10-in. 197 ft., Lansing 3,385 ft., some show oil 3,385-90 ft., show oil 3,540-60 ft., some show oil 3,575-80 ft., conglomerate 3,770 ft., Viola 3,858 ft., Simpson 3,985 ft., Arbuckle 4,046-4,202 ft., electrical log, T.D. 4,208 ft., 7-in. 3,631 ft., ripped 3,585-92 ft., 3,575-80 ft. and 3,541-65 ft., acid, swabbing.
Veeder Supply 1 Alter, W½ SW NW 15-1-18w, Pierre 110 ft., Niobrara 170 ft., Fort Hays 630 ft., Carlile 680 ft., Dakota 1,000 ft., Permian 1,500 ft., Topeka 3,165 ft., drilling 3,260 ft.
Johnson County: Stone-Anderson 1 Ellers, NW NE 29-6n-10e, west slope of Granite Ridge, Fort Riley 324 ft., drilling 400 ft.
Keith County: O. O. Petroleum 1 Jensen, NW NW NW 26-14-37w, drilling 1,650 ft.
Nemaha County: Ellis Bros. 1 Armstrong, W½ NE 10-6n-15e, Lansing 650 ft., some show gas 750 ft., fishing 775 ft.
Palensky 1 Casey, NW NE 7-5n-13e, Topeka 596 ft., Lansing 860 ft., Mississippi lime 1,655 ft., Kinderhook 1,785 ft., Hematite 1,801 ft., Hunton 2,025 ft., drilling 2,030 ft.
Richardson County: Harry Harper 1 Horn, S½ NE SE 35-3-16e, Lansing 917 ft., Mississippi lime 2,095 ft., Hunton 2,498 ft., cored 2,494-2,535 ft., some show oil 2,509-27 ft. and 2,527-30 ft., cored 2,545-58 ft., show black oil, cored 2,558-76 ft., stain, electrical log.
Uhri 1-A Ogle, NW SE SE 9-1-14e, old well, Hunton 2,258 ft., T.D. 2,264 ft., P.B. 2,252 ft., butane and acid, pumped 125 bbl. fluid in 24 hr., cut 30 per cent water, installing pump.
Sarpy County: Allen & Sherritt, NW SW 3-12n-11e, drilling 240 ft.
Dr. Simmons 1 Timm, W½ SW SE 15-13-12e, old well old T.D. 416 ft., cleaning out.

Lease Application Filed On South Dakota Acreage

PIERRE, S. D., Aug. 18.—Application for oil and gas leases on 500,000 acres of state land in western South Dakota, filed by Carter Oil Co. of Tulsa with the South Dakota Rural Credit Department, heightened interest in the area's lease play last week. Grover O'Neill, assistant director of the department, estimated that the total land leased through the Rural Credit Department would approach 1,500,000 acres in the state when the Carter application was included. Total lands under oil and gas leases, both public and private, are estimated at nearly 4,000,000 acres.

Lands included in the application were spread over 265 townships in 11 counties west of the Missouri River, and, in Jackson, Jones, and Lyman counties, and is land owned by the department which had not previously been leased. The largest acreage involved, however, was in Meade County where the application was spread over parts of 69 townships. Other counties affected were Perkins, Pennington, Zelback, Haakon, Mellette, and Tripp.

Virtually all the state-owned land in counties bordering the Missouri River has been under lease for more than a year along with property in Harding and Zelback counties farther west.

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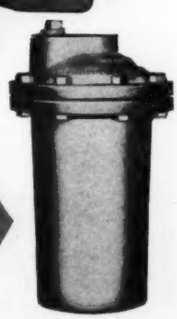

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Noble County, Ohio, Deep Test Nears Oriskany Zone

By STAFF CORRESPONDENT

NEWARK, Ohio, Aug. 18.—Exploration of the deeper horizons in the Ohio area continues. In Northwest Ohio the Ohio Oil Co. is rigging up on a location in Wyandot County, Antrim Township, for 1 Bessie E. Chatlain, Section 28. This is planned as a sub-Trenton test.

In Northeast Ohio two Clinton sand wildcats have been announced for Portage County. The East Ohio Gas Co. has a location on S. W. Anderson in Lot 9, Edinburg Township. In Deerfield Township the Magnolia Petroleum Co. has located on H. A. Forney in Lot 55.

In Noble County John T. Galey et al are drilling 106 ft. in the Onondaga lime in the wildcat on the Jacob Ullman heirs farm, NE Section 21, Elk Township. The Onondaga was topped at 4,512 ft., about 20 ft. above the expected Oriskany horizon. The hole will be reduced to provide a shoulder for the casing. The top of the Oriskany sand will be tested before casing is run, but the well was shut down after the pitman broke.

SUMMARY OF COMPLETIONS

Ohio

	No.	Bbl.	Footage
Oil wells	4	6	8,496
Gas wells	15	*7.5	34,926
Dry holes	7	.....	14,333
Total	26	.....	57,755

Indiana

	No.	Bbl.	Footage
Oil wells	7	260	13,711
Dry holes	4	.....	6,531
Total	11	.....	20,242

Western Kentucky

	No.	Bbl.	Footage
Oil wells	4	420	3,423
Dry holes	3	.....	3,862
Total	7	.....	7,285

*Million cu. ft.

OHIO COMPLETIONS

Ashland County

Lake Township: Gold Crown 13 A. A. Easley, Sec. 21, dry, Berea, T.D. 680 ft.

Athens County

Ames Township: Burt Carpenter 4 fee, SW Sec. 12, 2 bbl., first Cow Run sand, T.D. 112 ft.
Rome Township: G. R. Cook 2 M. P. Totman, Sec. 12, dry, first Cow Run, T.D. 342 ft.

Cuyahoga County

Brecksville Township: William Dempsey 1 W. S. Lister, Lot 58, dry, Clinton, T.D. 3,433 ft.

Fairfield County

Berne Township: City Natural 2 Hiram Stalder, Sec. 2, 60,000 cu. ft. gas, Clinton, T.D. 2,226 ft.

Guernsey County

Cambridge Township: George Jewell 1 Ray Bates, Sec. 5, 100,000 cu. ft. gas, shot, shales, T.D. 1,625 ft.

Holmes County

Richland Township: Ohio Fuel 1 C. D. Phillips, Sec. 1, 300,000 cu. ft. gas, acidized, Newberg, T.D. 2,587 ft.

Knox County

Union Township: Ohio Fuel 2 H. C. Whitney, Sec. 24, 1,760,000 cu. ft. gas, Clinton, T.D. 2,956 ft.

Lawrence County

Washington Township: Portage Producers 13 Simon L. David et al, Sec. 13, 300,000 cu. ft. gas, Berea, T.D. 1,230 ft.

Licking County

Madison Township: Ohio Fuel 1 Licking County Building & Saving Co., Lot 9, first quarter, 1,900,000 cu. ft. gas, Clinton, T.D. 2,740 ft.
Mary Ann Township: Allen Willey 2 W. A. Nethers, Sec. 15, 100,000 cu. ft. gas, shot, Clinton, T.D. 2,692 ft.

Lorain County

Lagrange Township: McMillen 1 Peoples Bank, Lot 22, dry, Clinton, T.D. 2,280 ft.
Huntington Township: Ohio Fuel 1 Louis Losoncy, Lot 10, dry, Clinton, T.D. 2,725 ft.

Medina County

Spencer Township: Ohio Fuel 1 M. F. Aldrich, Sec. 11, 600,000 cu. ft. gas, shot, Clinton, T.D. 2,727 ft.

Meigs County

Salem Township: Frank Utsinger 1 Alta Hewitt, Sec. 1, show gas, Salt sand, plugged, T.D. 650 ft.

Monroe County

Bethel Township: Hall & Henning 1 Stella Smith, NE Sec. 29, 617,000 cu. ft. gas, second Cow Run sand, T.D. 1,210 ft.

Morgan County

Marion Township: Williams et al 1 Ida Greathouse, Sec. 5, 500,000 cu. ft. gas, Brill sand, T.D. 870 ft.

Muskingum County

Brush Creek Township: Ohio Fuel 4 fee, Sec. 15, show gas in Clinton, water in Medina, plugged, T.D. 4,223 ft.

Noble County

Elk Township: R. L. Smithberger 33 T. J. Smithberger, Sec. 20, 40,000 cu. ft. gas, Germantown, T.D. 1,252 ft.

Perry County

Clayton Township: Shuff & Bucy 1 Humphrey Ford, Sec. 4, 40 bbl., shot, Clinton, T.D. 3,400 ft., having trouble with casing.
Preston Oil 1 J. F. Pennington, Sec. 9, 15 bbl., shot, Clinton, T.D. 3,340 ft.
Reading Township: Ohio Fuel 1 John R. Young, Sec. 4, 500,000 cu. ft. gas, shot, Clinton, T.D. 3,054 ft.

Tuscarawas County

Union Township: J. A. Upham 1 L. J. Kinsey, Sec. 26, 560,000 cu. ft. gas, shot, Clinton, T.D. 5,289 ft.

Washington County

Grandview Township: C. W. McCall 6 James Ewers, Sec. 21, 3 bbl., shot, Keener, T.D. 1,644 ft.
Liberty Township: Koon Run Oil Co. 6 G. C. Hendershot, Sec. 22, 40,000 cu. ft. gas, Maxon (Injun dry), T.D. 1,468 ft.

Wayne County

Plain Township: East Ohio 1 William F. Kean, Sec. 29, 95,000 cu. ft. gas, Newberg, Clinton dry, T.D. 3,000 ft.

INDIANA

EVANSVILLE, Ind., Aug. 18.—Production in Posey County's newest prospective pool opener, Cherry & Kidd et al 1 H. C. Ford, SE SW NW 34-4s-13w, has now fallen off to where the well is pumping only 15 bbl. of oil and an equal amount of water. Operators are continuing to test, however, hoping to make a commercial well. The well is producing from the McClosky at 2,976-86 ft.

Whisenant & Trenchard 1 James Bundy, NE NE SW 17-6s-14w, Posey County, was reported dry in the Tar Springs and drilling ahead for the Cypress last week. No. 1 Bundy is two locations west of Whisenant & Trenchard 1 Florence McFaddin, recent Cypress discovery well.

Central States C-1 Seifert, NE NW NW 30-6s-12w, third test in the new field west of the Caborn field, set casing last week preparatory to testing 12 ft. of promising saturation encountered in the Mansfield sand. Meanwhile, 2 miles east of this test, Paul Rossi has spudded a new wildcat, 1 Dembesneier, NW NW NE 32-6s-12w.

INDIANA COMPLETIONS

Wildcats

Daviess County: D. L. Norris et al 1 Adams, NE SE SW 35-2n-5w, dry at 505 ft., Golconda 445 ft., sand 465-505 ft.
Knox County: C. L. Wingate et al 1 Metropolitan Life, SW SW SE 21-7n-11w, dry at 2,238 ft.
Posey County: R. B. Martin et al 1 Harlem-Wolfe, SE SE SW 22-7s-15w, pumped 8 bbl. oil and 20 bbl. water, 2,000 gal. acid 2,795-2,810 ft., 3,500 gal. reacid 2,795-2,810 ft., T.D. 2,957 ft., P.B. 2,810 ft.
Randolph County: David Culpepper 1 Lewis, SW SE SW 4-19n-13e, dry at 1,330 ft.

Fields

Cannelburg, Daviess County: Swartzentruber et al 1 Beck, SE SW NE 8-2n-5w, pumped 15 bbl., natural, sand 598-638 ft., T.D. 639 ft., P.B. 638 ft.
East Calvin, Posey County: Tide Water 13 Doll, SW NW SE 33-3s-14w, pumped 75 bbl., 40-qt. shot 1,840-58 ft., T.D. 1,858 ft.
Griffin, Gibson County: Continental 45 Bozeman, NW SW SW 23-3s-14w, pumped 110 bbl. oil and 10 bbl. water, 60-qt. shot 2,632-50 ft., ripped casing 2,136-57 ft., T.D. 2,843 ft., P.B. 2,660 ft.
Heusler, Posey County: Sun 2 Renwick, NW NE NW 12-7s-12w, pumped 24 bbl., 20-qt. shot 1,908-14 ft., T.D. 1,914 ft.
Oakland, Gibson County: R. D. Brown 1 Bailey, NW NW SE 10-2s-9w, dry at 2,458 ft., Renault 2,293 ft., Ste. Genevieve 2,322 ft., Fredonia 2,375 ft.
South Griffin, Gibson County: W. C. McBride et al & Blood, NE SW SE 28-3s-14w, pumped 9 bbl. in 6 hr., pumped off, 20-qt. shot 2,796-2,810 ft., T.D. 2,893 ft., P.B. 2,810 ft.
Veale, Daviess County: J. W. Cannon 9 Evans, NE SE NE 8-2n-5w, pumped 19 bbl., natural, sand 590-607 ft., T.D. 607 ft.

INDIANA DRILLING REPORT

Daviess County: R. D. Brown, Inc., 1 Birch, S½ SE NW 21-2n-6w, first report, old well drilling deeper from 757 ft., sand 782-85 ft., slight show oil 785-88 ft., show oil 788-95 ft., H.F.W., Paoli 817 ft., Ste. Genevieve 851 ft., drilling 854 ft.
Hartman et al 1 White, SW NW SW 22-2n-7w, drilling 2,156 ft.
Elkhart County: M. C. Fletcher 1 Baughn, NE SE SE 13-38n-4e, S.D. 1,924 ft.
Gibson County: Schneider & Quinn 1 Schmidt, E½ SW SW 13-3s-9w, set 6-in. 948 ft., sand 1,000-35 ft., dry, 1,045-50 ft., water, S.D. 1,050 ft.
R. G. Brown 1 Watts, SW SW NW 29-2s-12w, set 10-in. 1,636 ft., drilling 1,664 ft.
R. N. Sylvester 1 Potts, NW SW SE 24-1n-10w Glen Dean 1,198 ft., Golconda 1,302 ft., 8-in. 1,305 ft., drilling 1,305 ft.
Greene County: Ohio Oil 1 O. P. Wells, N½ NW SE 2-7n-4w, Salem 502 ft., show gas 509-13 ft., est. 200,000 cu. ft., water 515 ft., sand 1,064 ft., show gas 1,064-68 ft., drilling 1,178 ft.
La Porte County: John E. Short 1 Stahley, W½ NW SE NE 35-36n-1w, spud and S.D.
Newton County: Palmer Corp. 1 Henkle, SE SE SE 36-30n-9w, drilling 855 ft.
Orange County: U. S. Oil 1 Willyard, SW NW NE SW 33-1n-1w, S.D. 968 ft.
Posey County: Whisenant & Trenchard 1 Bundy, SW NE SE 17-6s-14w, first report, surface casing.
Charles Loveless et al 1 Dauswan, NE NW NE 27-6s-13w, drilling 410 ft.
Central States 1 Seifert, NW NW NW 30-6s-12w, T.D. 1,097 ft., sand 1,079-97 ft., D.S. test 1,079-97 ft., recovered 180 ft. oil and show gas, 7-in. 1,080 ft., waiting on cement.
Central States 1 Breeze, SW SW SW 19-6s-12w, T.D. 1,994 ft., 10-qt. shot on bottom, shot into water, was swabbing 50 bbl. oil daily, now swabbing ⅔ water.
Brown et al 1 Reichert, SE NW SE 25-7s-15w, spud.
Cherry & Kidd et al 1 Ford, SE SW NW 34-4s-13w, T.D. 3,110 ft., pumped 13 bbl. oil and 15 bbl. water, testing.
Spencer County: J. B. Miller et al 1 Dooley, NW NE NW 19-7s-7w, T.D. 1,080 ft., fishing liner.
Goldsmith et al 1 Yeager, SW NE SE 6-7s-7w, set 12-in. 77 ft., 10-in. 383 ft., 8-in. 683 ft., drilling 750 ft.
Jesse Wilson et al 1 McCoy, S½ NE NE NE 12-7s-8w, drilling 725 ft.
Sullivan County: E. M. Self 1 James Land, NE NE NE 36-7n-9w, S.D. 1,450 ft.
Paul Doran et al 1 Huff, S½ S½ S½ N½ 34-8n-10w, location, first report.
T. H. Drake 1 Curry, NE NW 11-9n-8w, S.D. 1,000 ft.
Vigo County: Krauss-Ricketts et al 1 Hollenbeck, SW NE 14-10n-8w, set 12-in. 26 ft., drilling 360 ft.

EASTERN KENTUCKY

ASHLAND, Ky., Aug. 18.—One good producing gas well is included in the report of eastern Kentucky activities this week. The Kentucky-West Virginia Gas Co. has completed No. 643 on the J. M. Taylor land on Bushy Fork of Johns Creek in Pike County and the well is making 1,635,000 cu. ft. of gas from salt sand. The well reached a total depth of 1,005 ft.

The Kentucky-West Virginia Gas Co. has also completed No. 619 on the Lena Collinsworth land on Dock Johnson Branch in Pike County at a total depth of 2,996 ft. The well made 169,000 cu. ft. of gas in 12 hours from shale.

Drilling activities continued on the same upward level this week with a few new locations being made.

Johnson County

Inland Gas 224 John Horn, Rockhouse Creek, T.D. 2,364 ft., Cornliferous, ready for shot.

Knott County

Inland Gas Corp. operations:
225 Dan Martin, Big Branch, 1,465 ft., salt sand.
226 Hindman Settlement School, Smith Branch of Carr Creek, location.
227 W. R. Smith et al, Left Fork of Troublesome Creek, 664 ft., slate and shells.
Kentucky-West Virginia Gas Co. operations:
639 R. L. Conley, Jones Fork, 1,013 ft., sand.
5317 Jess Bates, Dry Creek, 1,695 ft., slate.
5319 David Martin, Sly Branch, 2,065 ft., slate and shells.
5325 J. M. Gibson, Jones Fork, 1,512 ft., Maxon.
5328 Williams Thornsberry, Bates Branch, idle.
5329 Richard Hall, Dick Hall Branch, 1355 ft., slate.
5330 Richard Hall, Right Beaver Creek, 150 ft., slate.
5339 Wilburn Thacker, Left Fork Troublesome Creek, 65 ft., slate.

Pike County

Kentucky-West Virginia Gas Co. operations:
618 T. B. Blackburn, Johns Creek, idle.
626 J. C. Mullins, Bush Run, 1,780 ft., Big lime.
627 Kentucky Maynard, 1,180 ft., sand.
628 Hope D. Wellman, 1,426 ft., sand.
640 Edmond Clark, Millers Creek of Johns Creek, 1,173 ft., lime shells.
641 W. T. Honaker, 310 ft., sand.
5320 William Ford, Ford Branch, 2,170 ft., slate and shells.
5322 W. A. Campbell, Island Creek, 1,459 ft., slate.
5323 S. B. Leslie, Hollybush Branch, rigging up.

(Continued on Page 95)

Cement Operators Assured Market For Production

By ROBERT INGRAM

ALTHOUGH there was no sudden increase in drilling operations in the Cement field, Caddo County, last week as a result of the announcement of greatly expanded pipe-line outlets, it was expected that a drilling campaign would be under way by fall. Under present conditions the field is capable of increasing its output considerably, undeveloped reserves are believed by many to be high and there was every indication that development would soon get under way at a fast tempo. Several thousand acres on the west end of the field were proved up some years ago, but the west end is still largely undeveloped and its limits have not been defined. There are also possibilities that deeper zones will be found productive adding to the reserves of some 20 producing sands already proved in various parts of the field.

That the lid was off production seemed assured when L. B. Simmons, president of the Rock Island Refining Co. of Duncan, Okla., made the announcement that his company would start construction this week on a 30-mile line to bring crude from Cement to connect with the Oklahoma Pipe Line Co. at Knox station near Marlow, Okla. Mr. Simmons said that he and L. H. Prichard, president of the Anderson-Prichard Oil Corp., had been negotiating for the past month as to how best to relieve the crude situation in the field and predicted that "the field will be relieved of any depressed market conditions that have prevailed in the past."

"If the Anderson-Prichard and the Rock Island requirements do not provide suitable market for the producers in that territory," he said, "then other arrangements have been completed by each of these two companies to take more oil if produced."

Anderson-Prichard was already starting construction of a 6-mile line from the field to the company's terminal at its refinery in Cyril where it will tie into the Magnolia Petroleum Co. 4-in. line from Cyril to Magnolia's Walters station, a trunk-line system to the south. A third line, proposed by the Texas Co., was still in the planning stage (see The Oil and Gas Journal, August 14).

Spacing Is Sought For Creek Sector

Zephyr Drilling Co. of Tulsa has petitioned the state Corporation Commission for 10-acre well spacing in a new area, which it opened northwest of Bristow in Creek County. Hearing was set for September 10. Area involved includes all of Section 34 and W½ NW and W½ SW 35-17n-8e, and all of Section 3 and W½ NW and W½ SW 2-16n-8e, comprising 1,600 acres. In July the company completed an oil well in the SE SE NW 34-17n-8e, in the Prue sand zone at 2,385 ft. The new field has not yet been named.

Hotulke Spacing Extension Sought

Extension of the area covered in the well-spacing order for the Hotulke pool of Pottawatomie County was asked by the Anderson-Prichard Oil Corp. in petition set for hearing by the Corporation Commission September 3. The company is testing 1 White, in C NE NW 30-9n-5e, and showing for a Hunton lime oil producer to extend the zone. In addition to new acreage, the proposed order would cover the Hunton lime zone with the present 40-acre spacing prevailing.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: North Bebee	3	724	7,731
Cement	2	1,194	6,970
Cumberland	1	155	5,065
Dill	1	175	3,693
Guthrie	1	424	5,437
West Hewitt	2	1,013	4,481
Oklahoma City	1	158	4,436
East Stroud	3	188	8,520
Tecumseh Lake	1	357	5,227
Other pools	19	3,928	48,591
Wildcats	2	20	5,338
Gas wells: Fields	3	*7.5	5,838
Dry holes: Fields	8	.....	21,406
Wildcats	8	.....	32,726
Total	55	.....	165,459
Recompletions†	3	1,817	.....

*Million cu. ft. †172 million cu. ft. gas.

OKLAHOMA COMPLETIONS

Wildcats

Herman Madvine 1 Osage ..... NW NW SW 14-22-10
Pumped 10 bbl. a day, 36 gravity, sand 1,883-91 ft., T.D. 1,891 ft., *pool opener.* Osage County.

Titus 1 Canaday ..... SE NW NE 36-11-8
Est. 10 bbl. oil and 750,000 cu. ft. gas, Cromwell 3,438-83 ft., 6-in. 3,083 ft., shot, T.D. 3,447 ft., *extends Dill pool east,* Okfuskee County.

Alexander & Hauke 1 Kreger . . SE SE NE 4-25-2w
Dry, T.D. 4,487 ft., Mississippian chat 4,353 ft., Kay County.

Baldwin 1 Hill ..... NW NW SE 26-8s-2e
Dry, T.D. 5,510 ft., Strawn 3,360 ft., Love County.

Delaney 1 Bandy ..... NW SE SW 13-7-2w
Dry, T.D. 7,360 ft., Sylvan 7,360 ft., Cleveland County.

Hughes-Thomas 1 Johnson ..... SW SW SE 26-4-5
Dry, T.D. 1,610 ft., Wapanucka 1,260 ft., Pontotoc County.

Lippert 1 Rosebush ..... NE SE SW 34-10-3
Dry, T.D. 5,442 ft., Wilcox 5,393 ft., Pottawatomie County.

Creekmore 1 Tipton ..... NW NW SW 23-15-5
Dry, T.D. 3,505 ft., Prue 3,445 ft., Lincoln County.

Beal 1 Murray ..... SE SE NW 12-16-7
Dry, T.D. 3,768 ft., Wilcox 3,749-68 ft., Creek County.

Thorpe 1-A Brazil ..... NE NE 33-7-17w
Dry, T.D. 1,044 ft., Arbuckle 940 ft., some show oil, Kiowa County.

Fields

Avoca, Pottawatomie County: Atlantic 4 McCurry, SE NE SW 6-6-4, pumped 220 bbl., Wilcox 4,467 ft., 5-in. 4,468 ft., T.D. 4,472 ft.

North Bebee, Pottawatomie County: Culver 2 Waite-A, SE SE NW 9-5-5, pumped 324 bbl., Hunton 2,275 ft., 7-in. 2,270 ft., T.D. 2,636 ft., acid.

Oils 2 Walker, SE NE SW 9-5-5, pumped 350 bbl., Hunton 2,175 ft., 5-in. 2,167 ft., acid, T.D. 2,462 ft.

Big Chief 1 Harrah, SW NW SW 10-5-5, pumped 50 bbl., Hunton 2,384 ft., 7-in. 2,390 ft. acid., T.D. 2,633 ft.

South Burbank, Osage County: Magnolia 5 Osage, NE NW NW 14-26-6, pumped 150 bbl. in 19 hr., Burbank sand 2,845-2,906 ft., perf. 2,846-2,906 ft., T.D. 2,908 ft.

Cement, Caddo County: Magnolia 6 Gingrich, SW NW NW 6-5-9w, pumped 34 bbl., Noble-Olson 3,295 ft., T.D. 3,510 ft., P.B. 3,320 ft., 5-in. 3,295 ft.

Ramsey 1-A Davis, SW NE NE 1-5-10w, flowed 193 bbl. in 4 hr., potential 1,160 bbl., Rowe sand 3,371-3,404 ft., 4-in. 3,446 ft., perf. 3,371-98 ft., T.D. 3,460 ft.

East Cromwell, Okfuskee County: Foundation 2 Brown, SW NW NE 35-11-8, flowed 951 bbl. in 24 hr., Cromwell 3,395 ft., 5-in. 3,398 ft., T.D. 3,422 ft.

Cumberland, Marshall County: Pure 8 Little-106, NE NW SW 27-5s-7e, flowed 155 bbl. in 4 hr. through 1-in. choke on tubing, Bromide 4,620 ft., first sand 4,917 ft., second sand 5,016 ft., 7-in. 4,917 ft., T.D. 5,065 ft.

Dill, Okfuskee County: Phillips 2 Replogle, SW NW 26-12-8, flowed 175 bbl., Cromwell 3,673 ft., 5-in. 3,668 ft., shot 3,677-93 ft., T.D. 3,693 ft.

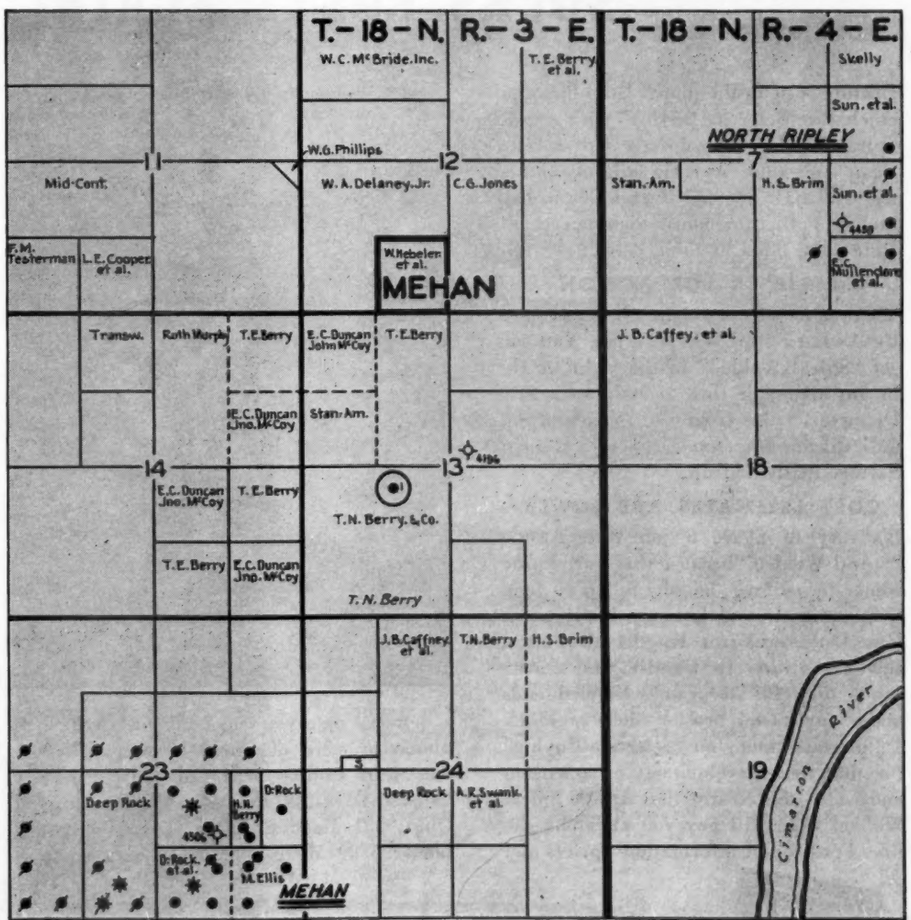
West Earlsboro, Pottawatomie County: Wood 1 Billington-A, NW SW NE 26-9-4, pumped 70 bbl. oil and 200 bbl. water, Dense 4,474 ft., 5-in. 4,447 ft., perf. 4,244-69 ft. and 4,243-4,313 ft., acid, T.D. 4,480 ft.

Ed Cox, Carter County: Skelly 3 Drew, SW SW SE 8-2s-2w, dry, T.D. 3,768 ft., Dornick Hills 3,754 ft.

Elliott 1-B Wolfe, NW NE SE 22-2s-2w, pumped 13 bbl. oil, 19 gravity, 7-in. 960 ft., T.D. 1,224 ft., P.B. 1,082 ft.

Empire, Stephens County: Pace 1 McMasters-B, SE SW NE 13-2s-8w, pumped 125 bbl. and 15 per cent water, 5-in. 2,019 ft., perf. 1,978-82 ft., T.D. 2,019 ft.

Guthrie, Logan County: Sunray 5 Donoghue, NW NE



Midcontinent Map Co., Tulsa

Completed last week for 164 bbl. of oil a day flowing through 13/64-in. choke was T. N. Berry 1 Lee, NW NE SW 13-18-3, in Payne County, which opens a new pool north of the Mehan field. The state Corporation Commission has recognized the pool as the Rattlesnake pool. It is also known as North Mehan. The discovery well is circled above

SE 7-17-1w, flowed 424 bbl. in 13 hr., Wilcox 5,412-37 ft., T.D. 5,437 ft.

West Frederick, Tillman County: Phillips 1 Samuel, SE SE SE 35-2s-19w, location abandoned.

West Hewitt, Carter County: Dixon 8 Woodworth, NE NW NW 20-4s-2w, flowed 459 bbl. through tubing, lime 2,073-79 ft., sand 2,079-93 ft. and 2,093-2,195 ft., 7-in. 2,062 ft., T.D. 2,215 ft.

Gibson 10 Herrell-A, SW SW NW 20-4s-2w, pumped 554 bbl., 7-in. 2,266 ft., perf. 2,076-2,246 ft., T.D. 2,266 ft.

Hewitt, Carter County: Turner 9 Stearns, SW SE SW 21-4s-2w, pumped 10 bbl. oil and est. 225,000 cu. ft. gas, 7-in. 2,337 ft., T.D. 2,369 ft.

Hobart, Kiowa County: Sherman 3 Watkins-B, NE SE SE 18-7-17w, dry, T.D. 1,281 ft., black shale 1,270-81 ft.

Sherman 4 Watkins-B, NW SE SE 18-7-17w, dry, T.D. 1,503 ft., Viola 1,393-1,503 ft., 8-in. 1,188 ft.

Argo 5 Ratliff, SW NE NE 19-7-17w, 140 bbl., sand 1,029-1,080 ft., T.D. 1,171 ft.

Isom Springs, Marshall County: Gill 2 Adams, SE NE NE 6-8s-6e, pumped 50 bbl., 25.4 gravity, sand 530-38 ft., T.D. 538 ft.

Knox, Grady County: SW SW SE 27-3-5w, pumped 18 bbl., sand 1,461-63 ft., 7-in. 1,434 ft., T.D. 1,463 ft.

East Little River, Seminole County: Delaney 1 Coker, NE SW 30-8-7, flowed 428 bbl. through ¾-in. choke, 39.4 gravity, Hunton 4,116 ft., perf. 4,120-30 ft., acid, T.D. 4,296 ft.

Oklahoma City, Oklahoma County: Anderson-Prichard 1 Proffitt, NE SW SE 15-12-3w, pumped 158 bbl. oil and 40 bbl. water, sands 4,032-46 ft., 4,050-68 ft. and 4,094-4,113 ft., 7-in. 4,300 ft., P.B. 4,138 ft., perf. 4,094-4,113 ft., T.D. 4,436 ft.

Sac and Fox, Lincoln County: Wilcox 5 Furry, SE NW NE 21-14-6, flowed 15 bbl., Prue 3,039 ft., 5-in. 3,041 ft., shot 3,055-3,108 ft., T.D. 3,120 ft.

Seminole County: Stanolind 1 Grisso-C, NW SE SW 15-9-6, pumped 10 bbl. oil and 2 bbl. water, Senora 2,849 ft., 5-in. 2,855 ft., shot 2,867-87 ft., T.D. 2,902 ft.

North Shawnee, Pottawatomie County: Jenkins 1-A Washington, NW SW NW 19-11-5, dry, T.D. 4,874 ft., Wilcox 4,864 ft., show oil in Hunton.

East St. Louis, Pottawatomie County: Eagle 3 School Land B, NE NW NE 16-7-5, pumped 250 bbl. oil, Wilcox 4,133-34 ft., 5-in. 4,109 ft., shot 4,137-52 ft., T.D. 4,152 ft.

East Stroud, Creek County: Lewis 1 Fisher, NW NE SE 32-15-7, flowed 116 bbl., Prue 2,790 ft., sand 2,795 ft., 5-in. 2,791 ft., shot 2,800-33 ft., T.D. 2,833 ft.

Shell 4 Bunyard, NE SE SE 31-15-7, 23 bbl., Prue 2,844-54 ft., T.D. 2,881 ft.

Shell 2 Denny, SE SE NW 32-15-7, 49 bbl., Prue 2,778-88 ft., T.D. 2,806 ft.

Tecumseh Lake, Pottawatomie County: NW NW NW 1-9-3, flowed 357 bbl. through ¼-in. choke, Wilcox 5,223 ft., T.D. 5,227 ft.

Velma, Stephens County: Magnolia 25 Dillard, NW SE NE 2-2s-5w, pumped 25 bbl., shot 675-85 ft., 8-in. 389 ft., T.D. 685 ft.

East Wetumka, Hughes County: Potco 1-A Morrison, NW SE SW 13-9-10, flowed 580 bbl. in 10 hr., ⅛ to ¼-in. choke, Hunton 3,738 ft., 7-in. 3,310 ft., acid.

South Wetumka, Hughes County: Crawford 1 Buck, SW SW NE 20-9-10, dry, T.D. 3,400 ft.

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LINE PIPE AND CASING

Miscellaneous

Creek County: Josaline Production 17 Dunlop, SE NW SW 27-16-9, 1,000,000 cu. ft. gas, Dutcher 2,901-11 ft., 8-in. 2,087 ft., P.B. 2,125 ft.

Sinclair 42 Dacon, N½ SE NE 16-17-7, pumped 5 bbl. oil and 5 bbl. water, Bartlesville 2,631-2,739 ft., T.D. 2,740 ft.

Latimer County: Le Flore 43 Goletta, C SW 12-6-21e, 2,333,000 cu. ft. gas, sand 1,518 ft. and 1,720 ft., T.D. 1,853 ft., shot.

McIntosh County: McNutt & Young 2 McNae, NE NE SW 1-12-16, 4,225,000 cu. ft. gas, Dutcher 1,835 ft., T.D. 1,860 ft.

Muskogee County: Paul 1-B Fewell, SW SW SW 3-13-16, dry, T.D. 1,816 ft.

Osage County: Held 26 Winton, NE NE NE 12-20-12, dry, T.D. 1,486 ft.

Blackwell 14 Osage, NE NW SW 3-28-11, 60 bbl., Wayside 911-43 ft., T.D. 948 ft.

Pawnee County: Lee 4-A Clute, NE NW SE 25-20-9, 8 bbl., Hominy Wilcox 2,484-98 ft., T.D. 2,514 ft.

Prunty 1 State, SW SE 33-20-5, dry, T.D. 3,593 ft., Mississippian chat 3,573-93 ft.

AVERAGE DAILY PRODUCTION

LEADING OKLAHOMA FIELDS

	Aug. 16
Allen	4,350
Billings	6,150
Burbank	8,150
South Burbank	7,350
Balance Osage	17,800
Blackwell district	3,500
Bristow-Slick	6,250
Coyle	4,025
Crescent	1,400
East Cromwell	1,850
Cromwell	2,775
Cumberland	6,500
Cushing-Shamrock	9,100
Dill	3,525
Duncan	3,425
Edmond	3,200
Fish	4,450
Fitts	11,350
Jesse	1,725
Graham-Fox	2,125
Guthrie	3,600
Healdton	8,500
Hewitt	16,100
Keokuk	2,825
Konawa	950
Lucien	5,550
Moore	825
Northeastern counties	16,750
Oklahoma City	87,250
Olympic	1,675
Ramsey	4,400
Sasakwa	1,150
Sholem-Alechem	2,525
Stroud	2,650
Seminole district:	
Bowlegs	6,000
Carr City	2,175
Dora	1,100
Earlsboro	3,725
East Earlsboro	1,700
South Earlsboro	475
Little River	6,025
East Little River	600
Mission	1,200
Seminole	5,900
East Seminole	850
Searight	1,800
Total Seminole	31,550
St. Louis-Pearson	17,900
Tatums-Tussy	5,250
Wewoka	1,800
Yale-Jennings	3,300
Total Oklahoma	418,200

WILDCAT DRILLING REPORT

Panhandle

Beaver County: T. R. Lofland 1 fee, W½ SE 13-6n-21ecm, rigged up standard tools, drilling 2,692 ft. in dolomite.

Southwestern

Atoka County: Campbell 1-A Rich, SE SW 2-1-12, drilling 600 ft.

Beckham County: H. C. McLaughlin 1 Stain, SW SW 25-8-25w, granite wash 2,211 ft., S.D. 2,225 ft.

Caddo County: Texas 2 Smith, NE NW 2-5-12w, set whipstock 1,973 ft., drilling new hole in Sylvan dolomite 2,230 ft., Viola 2,344 ft., drilling 2,670 ft. in Viola.

Denver 1 Sah-cam, SE SE 33-10-10w, to deepen, old T.D. 10,084 ft., cleaning out.

Cleveland County: Sinclair Prairie 1 Craig, NE NE SE 30-8-1w, second Wilcox 7,625 ft., T.D. 7,636 ft., P.B. 7,444 ft., perf. 7,395-7,415 ft, D.S. test 7,343-7,415 ft., no show, S.D.

Luther Mayer 1 McCommins, NW NE NE 15-10-1, first Wilcox 6,238-65 ft., P.B. 5,709-42 ft. in Hunton, cement didn't hold, squeezed.

Comanche County: William Atkinson 1 State, SW SW SW 16-2-9w, drilling 2,905 ft., granite wash.

Cooper 1 Bowen, SE NW SE 29-2-9w, T.D. 1,615 ft., granite wash, drilling out, casing seat gave away, to recement.

Garvin County: Doley & Ramsey 1 McCrummem, E½ SE NW 24-4-1w, Viola 4,515 ft., drilling 4,711 ft.

Jackson County: Rhinehart & Donovan 1 Petzold, SE SE NE 20-3-20w, drilling 2,710 ft.

Mutual 1 Caves, W½ NE NW 36-4-21w, show oil in wash 1,070-95 ft., drilling by bit 1,635 ft.

Jefferson County: Danciger 1 McClain, NW NW NE 4-4s-4w, reworked, Arbuckle 3,480 ft., S.D. 3,675 ft.

Seitz-Comegys-Seitz 1 Barrett, E½ SE SW 1-6s-6w, first report.

Johnston County: Baldwin & Reed 1 Davis, S½ SW NW 8-2s-8e, show oil in Viola 1,640-50 ft., Bromide 1,900 ft., sand 2,570-76 ft., P.B. 1,750 ft., reset 7-in. at 1,635 ft., acidized, no results, to reacidize.

Kiowa County: Kelly Wells 1-A Oster, SW NE NW 33-7-17w, S.D. 1,102 ft.

Hughes 1 Dugger, NE SW SW 14-6-18w, drilling 1,643 ft., lime.

Badger & Grover 1 Clark, SW SW NE 19-7-16w, drilling 1,393 ft. in Woodford shale.

Stauffer Petroleum 1 Mayo, NE NE NW 13-6-18w, first report.

(Continued on Page 95)

MICHIGAN OPERATIONS

Bay County Test Is Nearing St. Peter at Record Depth

By OTTO C. PRESSPRICH

SAGINAW, Mich., Aug. 18.—Gulf Refining Co. last week established a deep drilling record for the east and north central states as it continued drilling of its Bateson oil test in Bay County and neared the final objective, St. Peter sandstone. At week's end the hole was reported at 10,257 ft., and indications were that the St. Peter would be reached in another 50 ft. or so. Company officials said the previous record depth was attained by the Hope Natural Gas Development Co. last year in an unsuccessful 10,018-ft. hole drilled in West Virginia. They believe the Bateson is probably the deepest ever penetrated east of the Mississippi River, excepting the states of Mississippi and Louisiana.

At its last reported depth the Bateson was still drilling in Trenton limestone, logged at 9,400 ft. The test is in Section 2, Monitor Township. An oil show in Barry County where the St. Peter was tested a year or so ago is one basis of Gulf's hopes for the Bateson. In Barry County the formation is found above 5,000 ft. If the exploration of the deep zone in Bay County is unsuccessful, it is expected the hole will be plugged back to around 7,775 ft. where a heavy natural-gas zone was encountered and a fairly productive "wet gas" was recoverable, from which high-volatile gas may be refined.

SUMMARY OF COMPLETIONS

	No.	Prod.	Footage
Oil wells: Allegan County	1	15	1,610
Bay County	1	125	2,936
Kent County	1	5	1,915
Osceola County	1	3,600	3,622
Ottawa County	1	18	1,895
Gas wells: Osceola County	1	*11.5	1,233
Dry holes: Gratiot County	1	.....	3,288
Kalamazoo County	1	.....	1,872
Montcalm County	1	.....	3,601
Van Buren County	1	.....	1,351
Total	10	.....	23,323

*Million cu. ft.

Possible North Extension to Reed City Ready to Test

Meanwhile the Reed City oil field in Osceola County continued as the Michigan hot spot and interest was centered on the Gulf 1 Campbell in Section 19, Lincoln Township, due for completion about midweek. Drilling was below 3,200 ft. the first of this week and if the test is productive it will mean another extension of the rapidly developing section by adding a mile northerly to the proven area, on the heels of a 1-mile easterly extension last week when Gordon Oil Co.-Bolger Oil Co. completed a well in Section 28 which improved to a natural producer with a daily potential estimated at 3,600 bbl.

To date there were 14 producer completions without a single failure and the field's daily production under proration of 480 bbl. a well was around 7,000 bbl. a day, highest of any field in the state at present. Oil men are predicting that the field will develop into a minimum of 100 wells.

New Permits Reach Year's High

The past week was busiest of the year for the permits division of the state Conservation Department, which issued 26 franchises for oil and gas tests in 13 counties. Five of the 26 are for additional Osceola County wells, 4 for Van Buren, 3 each for Kent and Isabella, 2 each for Bay and Allegan, 1 each for Cass, Lake, Ottawa, Muskegon, Tuscola, Monroe, and Livingston. The permit total for the year stands at 531.

Elsewhere in Michigan activity was slight. H. H. Heinig was testing 1 Dodge in Forest Township, Genesee County, after logging an oil pay in Traverse lime at 1,892 ft. Prospects for the wildcat, however, were not believed good.

Altogether 10 completions were recorded for the week, with one location abandoned in Oceana County. In addition to the 3,600-bbl. Osceola extension, another Bay County well was completed with production on pump of 125 bbl. a day and smaller producers were added in Allegan, Kent, and Ottawa counties. The four dry holes included wildcat tests in Kalamazoo and Montcalm counties.

Drilling Near Roscommon Delayed

In the vicinity of the Roscommon County wildcat, which had as one result the payment of $30,100 for the oil rights on 40 acres of state-owned land, drilling difficulties have delayed progress on tests started as the result of the Eugene Hillard discovery. Trouble resulting from damage to the state forest lands have added a new handicap.

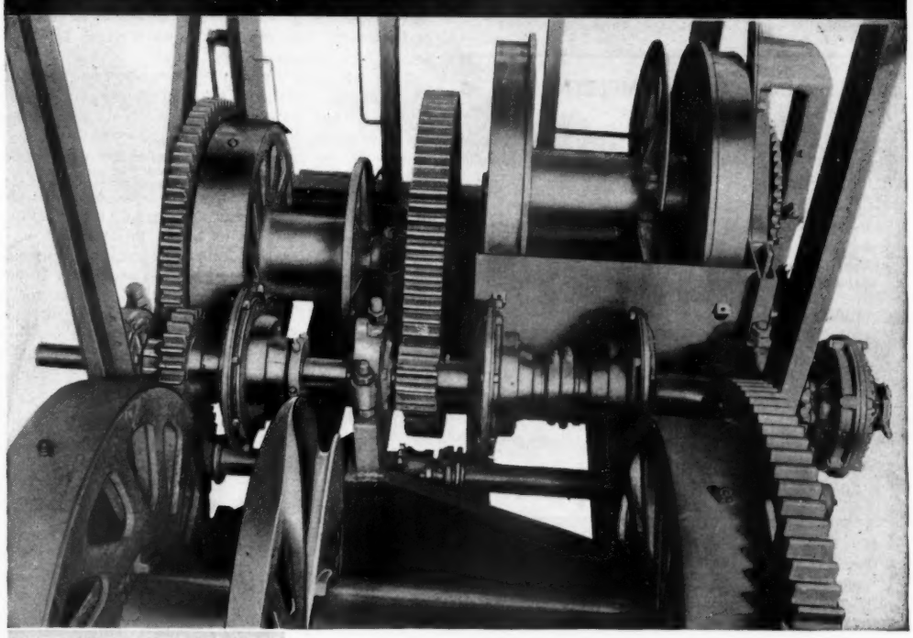
MICHIGAN COMPLETIONS

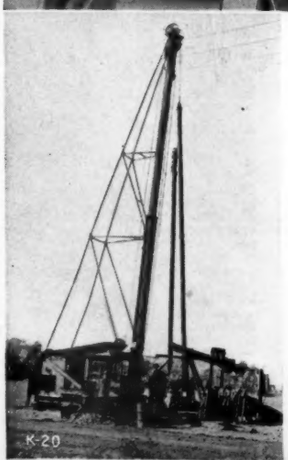
Allegan County

Salem Township: H. R. Fothergill 1 Green, NW SE SW 11-4n-13w, pumping 15 bbl., acid, T.D. 1,610 ft.

(Continued on Page 93)

TWO speeds forward and INSTANTANEOUS REVERSE





Two speeds forward and **instantaneous** reverse is one of the sweetest tricks Bucyrus-Erie has built into their new 36-L spudder. Plus the big equalized twin brakes on bull and sand reels, it means speed and control on the lines that saves a lot of time on any type of drilling or servicing. For instance, you can pull 4,200 pounds of tools from 3,000 feet in 8 minutes in high, or throw into low and get a pull of 14 to 15 tons to haul out of trouble. With the sand reel in high, you can take a 7x30" bailer 3,000 feet in 3 minutes. And the calf reel gives you to 47 tons of pull with 6-part tackle.

Here's a machine that is writing spudder history. Get in on it. Let it write its story of modern speed and profit on your books.

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NORTH CENTRAL TEXAS

Two Pools Opened in Young County, Another in Clay

By R. MARNE SANFORD

WICHITA FALLS, Tex., Aug. 18.—The intense wildcat play enjoyed in this district during the past few months showed definite and encouraging results last week. A new Marble Falls sand pool and a Caddo lime pool were opened in Young County, while in Clay County the Mississippi lime was promising a third new pool.

Just east of Newcastle in south central Young County, Dorian & Mitchell opened the Marble Falls pool at 1 Daniel, Block 421, T.E.&L. Survey. No. 1 Daniel flowed 42½ bbl. of oil in 1 hour through ¾-in. choke on tubing from the sand at 4,408-35 ft. The well was originally scheduled to test the Ellenburger lime section, which operators found dry.

A west offset to the discovery well, Dorian & Mitchell 1 Belnap Coal Co., in the northwest corner of Block 11, T.E.&L. Survey, was preparing a nitro shot for the pay section from 3,968 to 3,987 ft., after being drilled to the Mississippi lime.

SUMMARY OF COMPLETIONS

North Texas

	No.	Bbl.	Footage
Oil: Bryson	2	644	6,207
Hull-Silk	4	342	9,152
KM.A.	8	2,915	34,571
Other fields	7	1,353	23,561
Miscellaneous pools	10	722	17,812
Dry: Olney	3	.....	2,501
Other fields	1	.....	3,981
Miscellaneous pools	3	.....	5,589
Total	38	.....	103,374

West Central Texas

	No.	Bbl.	Footage
Oil: Fields	5	454	10,082
Miscellaneous pools	2	224	3,183
Wildcats	3	75	4,402
Dry: Fields	2	.....	3,464
Wildcats	2	.....	5,374
Total	14	.....	26,505

Seven and one-half miles north and slightly east of 1 Daniel, L. T. Burns found Caddo lime production at 1 Ragland, Block 257, T.E.&L. Survey, 2 miles northeast of True. Operators acidized the discovery well with 2,000 gal. in the Caddo formation from 3,970 to 4,052 ft., and allowed the well to flow into storage for 24 hours. The well then took a 3-hour potential, flowing 44 bbl. of oil and 22 bbl. of water the first hour; 65 bbl. of oil and 19 bbl. of water the second hour, and 61 bbl. of oil and 23 bbl. of water the third hour. At last reports the well was shut in because of filled storage.

Shut-in casing pressure was 800 lb. at the beginning of the test but by the end of the third hour had built up to 1,100 lb. Tubing pressure was 200 lb., flowing.

The prospect for new Mississippi lime production for southern Clay County appeared bright at the end of the week as L. T. Burns 1 Wynn, Block 34, Williams Survey, swabbed 250 bbl. of oil daily. Earlier in the week the test encountered saturated lime from 5,891 to 5,949 ft., with total depth of 5,968 ft. Operator treated the saturated section with 2,000 gal. of acid but a lost swab delayed testing operations for several days. At the end of the week operator was reported considering another acid treatment before attempting completion.

Fargo Pool Extended
¼ Mile Southwest

The Texas Co. at its first operation in Wilbarger County's three-pay Fargo pool, has completed 1 Anderson for a ¼-mile southwest extension. No. 1 Anderson flowed 65 bbl. of oil in 3 hours following a 9,000-gal. acid treatment in the 4,400-ft. section. The well was plugged back from a total depth of 4,652 ft. Location is in the NE cor. SE Section 33, Block 15, H.&T.C. Survey.

Four New Wildcat
Locations Staked

Four new tests were announced for this district during the week. Montague County will have two of them and Grayson and Foard counties one each.

In Montague County W. B. Omohundro and Benson & Benson have staked location for a 7,500-ft. exploratory test of the Fort Worth basin on the 79-acre farm of Dr. D. C. Riley in the Ellis Survey, 3½ miles southeast of Fruitland. Drilling is scheduled to start within the next 30 days.

Another deep wildcat for Montague County was spudded this week and is drilling below 1,275 ft. The test is the Chapman & McFarlin, Bridwell Oil Co., and Deep Oil Development Co. and Cullum 1 Fowler, in the John Massey Survey.

On a 4,000-acre farmout from the British American Oil Producing Co., Bruce Sullivan is planning a 6,000-ft. wildcat test for Foard County. Tentative location has been made in the J. M. Seaton Survey about 4 miles south of Crowell and 12 miles due east of the Johnson pool.

The 6,000-ft. contract is expected to carry the test to the Ellenburger, Lower Ordovician, lime. Drilling is scheduled to start on or before September 1.

Another test for the Collinsville area of southwest Grayson County was announced this week when Brown & Laves of Shawnee, Okla., staked location for a 4,100-ft. semiwildcat at 1 N. L. Stephenson, C. Quillen Survey, A-989. No. 1 Stephenson will test all horizons which have had showings in other tests. Two small pumpers in the area are producing from a sand at 3,833 ft.

NORTH TEXAS COMPLETIONS

Fields

Antelope, Clay County: Shell Oil 20 Henderson, 182 bbl. in 8 hr., 2-in. casing outlet, est. 425 bbl. daily, 3,145-70 ft.
Bryson, Jack County: Paul Steed 4 Derrick, 436 bbl. in 24 hr., ½-in. choke, 3,064-75 ft.
Three Bee Investment 3 Epperson, 208 bbl. in 24 hr., pumping natural, 3,014-20 ft., P.B. from 3,132 ft.
Fargo, Wilbarger County: Amerada Petroleum 1 Smith "Unit," 72 bbl. in 3 hr., ½-in. choke, est. 290 bbl. daily, 3,936-50 ft., P.B. from 3,975 ft.
Hull-Silk, Archer County: Guy J. Brown 3 Perkins, 9 bbl. in 24 hr., pumping, 1,020-33 ft.
P. Boswell-E. Van Deventer 1 White, 8 bbl. in 24 hr., pumping, 486-92 ft.
Andonell Massie 9 Wilson, 50 bbl. in 4 hr., ¾-in. choke, est. 175 bbl. daily, 3,786-3,802 ft.
King Oil and Phillips 14 Wilson "E," 41 bbl. in 3 hr., ¾-in. choke, est. 150 bbl. daily, 106-qt. shot, 3,806-21 ft., T.D. 3,825 ft.
Kadane, Archer County: Jack Kadane 2 Griffin "B," 59 bbl. in 3 hr., ½-in. choke, est. 190 bbl. daily, 4,368-79 ft.
K.M.A., Wichita County: Hanlon-Buchanan, Inc., 29 Fassett & Tuttle G, dry at 3,981 ft.
Lincoln & Moore 6 Bradley, 62 bbl. in 2 hr., ¾-in. choke, est. 275 bbl., 3,739-60 ft.
Golding & Cochran 13-Elib. Preston, 76 bbl. in 3 hr., ½-in. choke, est. 275 bbl. daily, top Ellenburger 4,460 ft., pay 4,463-88 ft.
Tide Water and Perkins-Cullum 7-Elib. Pettit, 57 bbl. in 2 hr., ¾-in. choke, est. 275 bbl. daily, top Ellenburger 4,357 ft., pay 4,357-4,452 ft.
Shell Oil and Phillips 17-A-E Preston A, 51 bbl. in 2 hr., ¾-in. choke, est. 290 bbl. daily, top Ellenburger 4,408 ft., pay 4,463-80 ft.
Shell Oil and Phillips 5 Preston B, 130 bbl. in 3 hr., ¾-in. choke, est. 325 bbl. daily, top K.M.A. 3,820 ft., Ellenburger 4,460 ft., pay 4,472-80 ft.
Tide Water and Perkins-Cullum 5-Elib. Pettit, 155 bbl. in 3 hr., ¾-in. choke, est. 450 bbl. daily, top Ellenburger 4,161 ft., pay 4,161-4,254 ft.
Tide Water and Perkins-Cullum 1-Elib. Ferguson, 99 bbl. in 3 hr., ⅝-in. choke, est. 350 bbl. daily, top K.M.A. 3,627 ft., Ellenburger 4,214 ft., pay 4,214-32 ft.
Shell Oil 26-Elib. Griffin, 196 bbl. in 2 hr., ¾-in. choke, est. 675 bbl. daily, top Ellenburger 4,340 ft., pay 4,342-4,425 ft.
Olney, Young County: Rannell 10 Jacks B, 3 bbl. in 24 hr., pumping natural, 517-55 ft., T.D. 566 ft.
S. O. Ewing and Homer Thompson 1 Courtney, dry at 920 ft.
W. F. Palmer 4 Marshall, dry at 982 ft.
Target Drlg. 1-A Cearley, dry at 599 ft.
Rogers & Rogers, Montague County: Stanolind 3 Miller, 62 bbl. in 3 hr., ½-in. choke, est. 250 bbl. daily, 1,000 gal. acid, top Ellenburger 5,278 ft., pay 5,188-5,208 ft., P.B. from 5,374 ft.
Voth, Cooke County: H. E. DeLee 2 Rosson, 20 bbl. in 24 hr., pumping natural, 1,114-70 ft.
Walnut Bend, Cooke County: Sinclair Prairie 5 Cox B, 75 bbl. in 6 hr., pumping natural, est. 175 bbl. daily, perf. casing 4,066-88 ft., P.B. from 4,927 ft.

Miscellaneous Pools

Archer County: C. L. Shive 1 Sealy, dry at 1,397 ft. Pet. Prod. 17 King, 95 bbl. in 24 hr., pumping 1,224-38 ft.
Baylor County: British American Oil 10 Turbeville, 105 bbl. in 24 hr., pumping, 2,515-16 ft.
Clay County: C. Y. Gorman 8 Taylor, 24 bbl. in 24 hr., pumping natural, 1,129-34 ft.
Frank Wood 1 Taylor, dry at 1,342 ft.
George Golden 1 First Joint Stock Land Bank C, 19 bbl. in 24 hr., pumping natural, 1,123-37 ft.
George Graham 7 Hansard, 10 bbl. in 24 hr., pumping, 20-qt. shot, 1,130-36 ft., P.B. 1,142 ft., T.D. 1,168 ft.
George Graham 10 Hansard, 50 bbl. in 24 hr., pumping natural, 1,176-88 ft.
George Graham 12 Hansard, 60 bbl. in 24 hr., pumping natural, 1,132-48 ft.
Cooke County: Trumter Pet. 15 Stacey A, 15 bbl. in 24 hr., pumping natural, 742-52 ft.
Wichita County: Huckleberry & Cline 3 Stone, 59 bbl. in 2 hr., est. 325 bbl. daily, ½-in. choke, 3,590-3,610 ft., 3,648-56 ft.
Young County: Panhandle Ref. and Rankin 1 Slater, dry at 2,850 ft.
Falcon Co. 1 Higdon, 19 bbl. oil and 2 bbl. water in 24 hr., 4,000 gal. acid, 3,751-75 ft.

NORTH TEXAS ACTIVE WILDCATS

Clay County: Bridwell Oil 1 Myers (old well drilling deeper), Charleton Thompson Sur. A-444, old T.D. 6,065 ft., prepare to bail, 75 ft. oil and 1,500 ft. water in hole, T.D. 6,065 ft.
L. T. Burns 1 Hodges, 330 ft. from S and 1,320 ft. from W lines Sec. 64, J. H. Belcher Sur., 6,000-ft. rotary test, moving in material.
J. A. Coker 1 Barber, 750 ft. from S and 950 ft. from E lines Sec. 31, B. Kellogg Sur., 1,150-ft. cable-tool test, drilling 770 ft., first report.
Norwood & Waggoner 1 Huff, 1,937 ft. from E and 2,957 ft. from S lines, J. Bradshaw Sur. A-17. 1,200-ft. rotary test, location.
Royal Pet. 1 Hatfield, 440 ft. from S and E lines, W. G. Glass Sur., 6,000-ft. rotary test, drilling 5,645 ft.
Sinclair Prairie 1 Scheer, 1,124 ft. from E and 330 ft. from S lines, Sec. 47, Orange C.S.L. Sur. A-368, derrick and moving in material.
Superior Oil 1 Seigler, 467 ft. from S and E lines, W 120 acres, Sec. 3211, T.E.&L. Sur., 5,600-ft. test, drilling 4,520 ft.
Cooke County: Burk Royalty Co. 1 Ware, 330 ft. E of A. C. C. Bailey Sur. A-44, and 330 ft. N of H. P. Ware tract, 2,300-ft. test, 7-in. casing at 2,065 ft., drilling plug.
Dickson Oil and R. B. George 1 George, 330 ft. from NE NW E 40 acres, R. B. George farm, James Bradshaw Sur. A-29, drilling 5,663 ft.
H. E. Herrell 1 Clerr, 200 ft. N and 934 ft. W of most northerly SE cor. farm in H. Dixon Sur. A-335, S.D. 925 ft., orders, first report.
Paul Stevenson 1 Donald, 650 ft. NE and 2,050 ft. NW of E cor. J. Cuffey Sur. A-1545, but in T. B. Hardwick Sur. A-1599, 3,000-ft. rotary test, drilling 1,723 ft.
Denton County: Jones Drlg. and D. S. Hager 1 Waide, 467 ft. from S and E lines, W 160-ac. tract in J. Pearson Sur. A-1050, rigging up rotary.
Jack County: F. Kirk Johnson 1 Shawver, 660 ft. from S and 520 ft. from E lines, NW SE J. Turner Sur. A-609, 5,500-ft. test, drilling 3,985 ft.
Magnolia 1 Borden, 1,000 ft. from N and 500 ft. from W lines, W. R. Smith Sur. A-547, Ellenburger test, drilling 2,335 ft.
O. J. Perrin 1 Brumbelow, 1,045 ft. from S and 720 ft. from E lines, H. C. Ayers Sur. A-4, top Marble Falls 5,390 ft., attempting to free stuck drill pipe.
Ben Rankin and Elliott Prod. 1 Stewart, 738 ft. from S and 660 ft. from E lines, Sec. 2799, T.E.&L. Sur., 4,400-ft. test, S.D. 2,745 ft.
Montague County: Benson Bros. 1 J. J. Lowery, 1,878 ft. from W and 1,506 ft. from S lines, Sec. 72, A. Beason Sur. A-20, 6,200-ft. rotary test, top Caddo lime 5,736 ft., preparing to core, 5,777 ft.
Benson & Benson 1 Sealy, 330 ft. S and E, SW cor. Sec. 30, H.&T.C. Sur., but in J. P. Owensby Sur. A-578, old well drilling deeper, old T.D. 5,762 ft., first report.
J. A. Chapman 1 Fowler, 330 ft. from S and E lines. J. W. Massie Sur. A-463, preparing to spud.
Walter H. Gant 1 Turner, 330 ft. from N and E lines, Sec. 59, E.T. Sur., drilling 5,748 ft.
Shell Oil 1 Thomas, 1,255 ft. from W and 467 ft. from S lines, Sec. 95, Kaufman C.S.L. Sur. A-407, 5,000-ft. test, running 4½-in. casing to 3,023 ft.
Superior Oil 1 Sealy A, 950 ft. from W and 330 ft. from S lines, A. B. Morton Sur. A-1175, 5,700-ft. rotary test, drilling 5,719 ft.
Wilbarger County: F. H. E. Oil and Fleming & Kimbell 1 Allison, 467 ft. from S and W lines Allison 90-ac. tract out of NW cor. Sec. 54, Blk. 12, H.&T.C. Sur., 6,000-ft. test, drilling 4,440 ft.
Young County: Consolidated Oil 1 Dunigan, 467 ft. from S and E lines, Sec. 163, T.E.&L. Sur., 5,000-ft. test, P.B. to 4,290 ft., treated with 3,000 gal. acid, swabbing and bailing.
R. P. Dorian 1 Daniels, 330 ft. from S and W lines, Sec. 421, T.E.&L. Sur., 6,000-ft. test, drilled plug and reperf., no results, will P.B. to 4,500 ft. and perf. again.
F. H. E. Oil and Fleming-Kimbell Corp. 1 Graham, SE cor. Sec. 2912, T.E.&L. Sur., 5,000-ft. test, preparing to squeeze off perf.
Tom B. Medders 1 Daws, 933 ft. from N, E, S, and W lines, NW T.E.&L. Sur. 750, 5,500-ft. test, drilling 3,551 ft.

Major Gas Field Showing In Hamilton County

FORT WORTH, Tex., Aug. 18.—Hamilton County may be in line for a major gas field with the com-

pletion of the Lone Star Gas Co. 1 Marwitz, in the western part of the county. Following acid treatment in the pay section at 2,660 ft. the well gaged 40,000,000 cu. ft. of gas. The well is ½ mile from a dry hole abandoned last month by the same firm.

In Haskell County another wildcat was showing gas early in the week. J. W. Crites 1 T. G. Hendrick, J. Fenner Survey, tested 13,000,000 cu. ft. of gas daily in sand encountered from 1,476-89 ft., total depth.

Coleman County

Wildcat Staked

Merry Brothers & Perini have spudded a deep 4,000-ft. wildcat in northwestern Coleman County on the C. M. Greer farm. The test is located in the southwest part of Subdivision 2, Hiram Kegans Survey 520 and is midway between the old Goldsboro pool and the Novice pool, both of which produce from shallow sands.

Taylor-Jones Area

Gets New Test

A northwest outpost to the Stith pool, one of the three new pools opened in the Taylor-Jones County line area, has been staked by Jones & Stasney and Grover & Rose as 1 A. J. Cannon, Subdivision 81, De Witt C.S.L. Survey, in Jones County.

No. 1 Coleman will be the fourth new operation for the area. Two miles west of the Stith pool, two outposts to the new Wimberly area are drilling, while a few miles south across the Taylor County line Lewis Production is drilling 1 Huddleston three locations east of the new shallow pool opened by W. H. Peckman 1 Perry.

WEST CENTRAL TEXAS COMPLETIONS

Wildcats

Callahan County: F. E. McCreedy 2 Kelton, 2,350 ft. from N and 150 ft. from W lines, Sec. 148, B.B.B. &C. Sur., 10 bbl. in 24 hr., 20-qt. shot, 762-68 ft.

Comanche County: L. O. Stutenrouth 1 Kirk, John Talbot Sur. A-941, 50 bbl. in 24 hr., open tubing, 80-qt. shot, 2,554-2,602 ft., 2,000 gal. acid, T.D. 2,627 ft.

Parker County: J. L. Higginbotham 1 Wheeler, J. B. Brannon Sur. A-1928, dry at 5,255 ft.

Shackelford County: Ungren & Frazier 2 Dyer A, Sec. 86, Blk. 12, T.P. Sur., 15 bbl. in 24 hr., 925-29 ft., T.D. 932 ft.

Stephens County: George R. McManis 1 Crudgington. 180 ft. from E and 330 ft. from S lines, Sec. 1268, T.E.&L. Sur., dry at 119 ft.

Fields

Akard, Jones County: Ungren & Frazier 2-A Akard, 157 bbl. in 24 hr., 2,126-38 ft.

Buff Creek, Shackelford County: Fain-McGaha 5 Morris, dry at 1,560 ft.

Carbon, Eastland County: O. J. Dillingham 1 Jackson, 10 bbl. in 24 hr., pumping, 300-qt. shot 2,579-2,643 ft., 2,000 gal. acid, 2,561-2,646 ft.

Cook, Shackelford County: Roeser & Pendleton and Continental Oil 5-A-118 Cook, 75 bbl. in 24 hr., 1,696-1,705 ft.

Harvey, Shackelford County: T. K. Simmons 18 Harvey, 82 bbl. in 24 hr., 20-qt. shot, 1,650-63 ft.

Lewis, Jones County: Butler & Horne and Miller 2 Linderman, 130 bbl. in 24 hr., 40-qt. shot, 1,916-30 ft.

Salt Creek, Brown County: Central Texas Gas 1 Davis, dry at 1,904 ft.

Miscellaneous Pools

Shackelford County: Grace Knight 1 Davis, 141 bbl. in 24 hr., 29-qt. shot, 1,581-98 ft.

Daniels & Pardue 18 Davis, 83 bbl. in 24 hr., plus 15 per cent water, 30-qt. shot, 1,575-85 ft.

WEST CENTRAL TEXAS ACTIVE WILDCATS

Brown County: H. P. Evans 1 Starkley, SE SE Sec. 3, H. C. Walker Sur., 1,200-ft. test, drilling 875 ft.

A. O. Turner 1 White, 1,320 ft. from N and 330 ft. from W lines, E. Ferguson Sur. 110, 1,000-ft. cable-tool test, drilling 390 ft.

Callahan County: F. J. Borman 1 Higgins, 1,020 ft. from N and 200 ft. from E lines, NW Sec. 59, D.&D.A. Sur., location, first report.

J. D. Kynaston 1 Seale, 868 ft. from S and 1,859 ft. from W lines, J. H. Brown Sur. 254, 1,000-ft. test, S.D. 422 ft., orders.

Roy Lacy 1 Irvin, 330 ft. from N and 1,120 ft. from E lines, S½ G. W. Benton Sur. 349, location, first report.

Coleman County: Gant & Evans 1 Strickland, 530 ft. from S and 1,587 ft. from W lines farm in Day Sur. 636, drilling 1,168 ft., first report.

Murry Hart 1 Seale, 2,500 ft. from W and 900 ft. from E lines, N. Eubanks Sur. 270, 2,000-ft. cable-tool test, drilling 1,054 ft., first report.

States Oil 1 Frank Hudson B, 467 ft. from S and 1,401 ft. from W lines, N½ Sec. 22, Blk. 2, T.& N.O. Sur., 3,500-ft. rotary test, drilling plug, T.D. 3,460 ft.

States Oil 1 Hughes, 2,465 ft. from S and 2,335 ft. from W lines, Sec. 34, Blk. 2, G.H.&H. Sur., 3,600-ft. rotary test, drilling 1,710 ft.

West Coast Prod. Corp. 1 Morris, SW cor. NE 160 acres, J. Greenwood Sur. 304, cleaning out to deepen.

Comanche County: L. H. Choate 1 Pearl Kirk, 467 ft. from S and E lines, P. D. Crump Sur. A-1905, drilling 925 ft.

Guyle Grenolds 1 Shoults, 200 ft. from N and 450 ft. from W lines, Lot 30, Lampasas C.S.L. Sur. 34, A-608, 750-ft. cable-tool test, S.D. 500 ft., orders.

O. L. Johnson 1 Barner, 816 varas from S and 1,612 varas from E lines, Baimes farm in Yarberry Sur. A-1035, first report.

Concho County: C. M. Joiner Leasing Corp. 1 Armor, 1,315 ft. from S and 330 ft. from W lines, Sec. 105, Blk. 72, T.&N.O. Sur., old well drilling deeper, old T.D. 1,565 ft., drilling 2,530 ft.

Eastland County: Bryan & Stewart 1 Hall, 330 ft. from N and E lines, SE Sec. 46, Blk. 2, H.T.&B. Sur., fishing bailer, T.D. 2,763 ft.

Dodds Oil 1 Hightower, NE SE Sec. 4, Blk. 3, H.& T.C. Sur., S.D. 3,310 ft., orders.

R. H. Gaddy 1 Vestal, 330 ft. from S and 1,755 ft. from W lines, Samuel Damon Sur., 2,800-ft. rotary test, drilling 437 ft.

Stewart Oil 1 Shaeffer, 660 ft. from E and 1,980 ft. from S lines, 394-ac. farm in Moses Allen Sur. 26, 3,500-ft. test, drilling 614 ft., "tight hole."

Fisher County: Mid-American Resources, Inc. (formerly Minerals Research) 1 Prather, 660 ft. from S and 467 ft. from E lines, Sec. 53, Blk. 1, H.T.&B. Sur., preparing to perf. casing to test, T.D. 3,367 ft.

Shell Oil 1 Vaughn, 467 ft. from N and 1,787 ft. from W lines, Sec. 205, Blk. 21-V, H.&T.C. Sur., 7,250-ft. test, drilling 1,530 ft.

Haskell County: J. W. Crites 1 Hendricks, 600 ft. from N and 2,636 ft. from E lines, J. Fenner Sur. A-582, 1,750 ft. cable-tool test, gas sand 1,467-89 ft. tested 13,000,000 cu. ft. gas, S.I.

Jones County: Butler & Horne Drlg. Co. 1 Wimberly, 330 ft. from S and W lines, 200-ac. farm in Guadalupe Martinez Sur., 2,700-ft. test, drilling 1,690 ft.

Danciger Oil & Ref., Inc., 1 Reeves, 330 ft. from W and 1,600 ft. from S lines, 460½-ac. farm in E½ Maria Rita Longoria Sur. 258, 2,600-ft. test, underreaming 8¼-in. casing at 2,267 ft., T.D. 2,300 ft.

Fain-McGaha 1 Hollis, 330 ft. from E and 1,300 ft. from N lines, NW Sec. 26, Blk. 15, T.P. Sur., 2,500-ft. test, location, first report.

T. D. Humphrey 1 Mary Triplett, 3,050 ft. from N and 330 ft. from W lines, James Goocher Sur. 199, 2,500-ft. cable-tool test, underreaming 7-in. casing at 2,380 ft.

McCullock County: C. M. Joiner 1 S. A. Lawson, 860 ft. from N and 550 ft. from E lines, Valentine Hohman Sur. 1093, 2,000-ft. test, drilling 724 ft.

Mills County: Three Widows Oil 1 Burdett, 467 ft. from N and W lines, Lot 59, Haves C.S.L. Sur., 3,000-ft. test, drilling 2,752 ft., "tight well."

Palo Pinto County: Hickok & Reynolds 3 Gauldin, 467 ft. from S and E lines, Sec. 1756, T.E.&L. Sur., 4,250-ft. cable-tool test, moving in spudder.

Shackelford County: F. A. Aikin 1 Shotwell, 1,520 ft. from E and 1,020 ft. from S lines, Sec. 55, Blk. 14, T.P. Sur., drilling 1,488 ft.

Aragon Oil 1 Walls Pasture, SW cor. Sec. 39, B.A.L. Sur., 4,000-ft. test, drilling 3,681 ft., gas sand at 3,661-66 ft. testtd 250,000,000 cu. ft.

R. H. Roark 1 Elliott B, 660 ft. from S and E lines, SW Sec. 9, L.A.L. Sur., 5,000-ft. cable-tool test, gas sand 611-68 ft., well caught fire, cleaning up after fire, T.D. 672 ft.

Ungren & Frazier 3 Dyer A, 1,595 ft. from E and

(Continued on Page 80)

36,000 CARLOADS of STEEL PIPE Safely DELIVERED

We warrant the arrival of our mill applied Coating-and-Wrapping on STEEL PIPE at first rail destination in same sound condition that it left the Mill.

The Unit-Load Method which we developed (see illustration) assures safe delivery.....

Schematic Construction of Specification TAX-1

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• EXPORT OFFICE: SAN FRANCISCO, CALIFORNIA •

Production Curb Is Expected As Output Continues Up

By L. P. STOCKMAN

LOS ANGELES, Calif., Aug. 18.—Developments in California during the past week were not of a favorable nature primarily because crude-oil production is running substantially above last month to date in the face of a lower demand and the loss of four additional tankers from coastal service. Production during the first 12 days of August averaged 655,134 bbl. daily against an allowable of 609,891 bbl. and a production of 639,578 bbl. daily during the first 12 days of July. Overages in production appear rather general throughout the state and reports drifting through from the nation's capital indicate that some form of emergency regulation of production will be announced shortly.

It is generally believed that the Conservation Committee of California Oil Producers, official curtailment body organized and administered by producers themselves, will be given the task of carrying out instructions and provisions outlined by the general chairman and division chairmen of District 5.

The apparent deflection that seems to have taken place in California during the past 60 days from a production standpoint does not indicate any disagreement among producers or the Conservation Committee from a curtailment standpoint but rather indicates a general belief that some form of regulation is imminent and to be expected. This is due to an unavoidable condition that can be charged to the fact that there has been a period of suspense that has been necessary in order that the various chairmen may arrive at a definite conclusion that will result in the least confusion in a complex industry. Members of the Conservation Committee of California Oil Producers feel that there will be no hesitancy in complying with any orders issued for the guidance of producers. What is needed now is a definite program toward which producers, marketers, refiners, and pipe-line operators can work with a tangible objective in view.

SAN JOAQUIN VALLEY

In the Paloma field of Kern County, Union Oil Co. has passed the 9,350-ft. level in 81 Morgan in 14-32s-26e. Western Gulf Oil Co. has started drilling operations on 12-7 Symons in 7-32-27e. Gulf's new well is located considerably east of the most easterly producing well in the field which in this case is 12-12 Kern County Land in 12-32s-26e. The Paloma field is strictly a distillate field and must be developed accordingly. A few months ago, it appeared quite probable that actual operation along this line would take place within a short time but at the last minute something developed to hold up operation.

In the meantime some operator put a second lease on Union's Morgan lease and this forced the latter to begin drilling operations or lose the property. The greater part of the productive and potentially productive acreage in the Paloma field is held jointly by Western Gulf Oil Co. and Texas Co. The largest owner in fee is Kern County Land Co. which holds title to the center of the productive area. While waiting for the outcome of drilling which, in the final analysis, will determine the future status of participating acreage in the Paloma unit plan Western Gulf Oil Co., Ohio Oil Co., and Texas Co. will proceed with experimental work and install a small pilot plant. The possibility that the productive acreage in the Paloma field may greatly exceed present expectations or be limited by faulting has resulted in the starting of a program whereby operators holding acreage outside present proved land will drill new wells and thereby become eligible for participation in the unit plan. In the meantime Western Gulf will purchase gas from Southern California Gas Co. instead of taking its fuel requirements by opening up one of its several completed wells.

Several wildcats are nearing the critical stage in the San Joaquin Valley and within the next few weeks one may see the abandonment of several deep tests or the discovery of new deep fields. These include Ohio's 1-G Kern County Land in the Bellevue district of Kern County in 36-29s-26e, which at present is drilling ahead in the Vedder zone of Miocene age. This well found top of the Rio Bravo at 10,475 ft. and cored top of the Vedder at 10,512 ft. So far the Rio Bravo and Vedder in which production had been expected is gray sand. At Buttonwillow, Texas Co. has suspended work on 47-15 Southern Pacific at 12,138 ft. and has plugged back to 4,700 ft. after failing to uncover production. Superior Oil Co., however, is still drilling ahead in 13 Kern County Land in this district at 12,500 ft. A. N. Macrate's 1 Haberfeld, south of the Greeley field in 32-29s-26e, will be a deep Rio Bravo and Vedder test but this well is just getting under way. In the Shafter district of Kern County Continental Oil Co. has passed 12,650 ft. but is still believed to be above the Vedder zone. This well is getting quite deep and should find the Vedder within the next few hundred feet if the section is normal.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: San Joaquin Valley	5	4,787	37,284
Coastal district	3	5,785	16,059
Los Angeles Basin	6	1,979	21,859
Dry holes: Fields	5	.....	26,705
Wildcats	2	.....	7,831
Total	21	.....	109,738
Recomp.: San Joaquin Valley	1	80	.....
Coastal district	1	241	.....
Los Angeles Basin	3	360	.....

SAN JOAQUIN VALLEY COMPLETIONS

Coalinga Northeast, Fresno County: Getty-Pacific West, 4 Coal. Comm., 30-19s-16e, flowed 2,250 bbl., 26.9-gravity, 0.2 per cent cut, 1,750,000 cu. ft. gas, 18/64-in. bean, pressures 1,150/1,200 lb., T.D. 8,210 ft., 100-mesh perf. 8,166-8,205 ft., Kreyenhagen 6,535 ft., completed in Gatchell oil sand 8,118-8,210 ft. of Eocene age.

Coalinga Southeast, Fresno County: R. S. Lytle 1-7-F, 7-20s-16e, flowed 1,336 bbl., 33.1-gravity, 1.1 per cent cut, 775,000 cu. ft. gas, 23/64-in. bean, pressures 950/1,000 lb., T.D. 6,837 ft., 100-mesh perf. 6,740-6,837 ft., Kreyenhagen 5,413 ft., green sand 6,537 ft., completed in Gatchell oil zone of Eocene age 6,692-6,836 ft., bottomed in siltstone.

Fruitvale, Kern County: Meridian Oil Co. 1 fee, 23-29s-27e, pumped 80 bbl., 19.4-gravity, 25 per cent cut, T.D. 3,695 ft., redrilled to 3,437 ft., perf. 3,322-3,432 ft., recompleted in Kernco zone of Kern River series.

Kern River, Kern County: General Petroleum 46 Young, 14-28s-27e, pumped 190 bbl., 14.5-gravity, 25 per cent cut, T.D. 1,951 ft., 140-mesh perf. 1,627-1,719 ft., 1,732-80 ft., 1,792-1,820 ft., 1,842-1,919 ft., completed in Tegeler zone of Kern River series.

Kettleman North Dome, Fresno County: K.N.D.A. 341-30-J, 30-21s-17e, flowed 216 bbl., 45-gravity, 0.5 per cent cut, 18,000,000 cu. ft. gas, 22/64-in. bean, pressures 2,900/3,060 lb., T.D. 10,910 ft., perf. 10,310-10,590 ft., 10,680-10,905 ft., brown shale 6,170 ft., bentonite 7,232 ft., Temblor 7,277 ft., Kreyhagen 9,488 ft., completed in McAdams sand of Eocene age 10,268-10,910 ft.

Richgrove wildcat district, Kern County: A. E. Dawson 1 Richgrove, 3-25s-27e, abandoned in granite at 2,525 ft., Vedder zone of Miocene age 2,394 ft., cored 4 ft. of poorly saturated Vedder oil sand 2,394-98 ft.

Tejon wildcat district, Kern County: Reserve Oil & Gas 33-1 Tejon, 33-11n-19w, abandoned at 5,306 ft., this well produced for several months.

Tupman, Kern County: Richfield 45-28-A Kern County Land, 28-30s-25e, flowed 795 bbl., 32.6-gravity, 0.5 per cent cut, 850,000 cu. ft. gas, 96/64-in. beans, pressures 150/750 lb., T.D. 9,376 ft., perf. 8,980-9,051 ft., 9,090-9,240 ft., 9,280-9,371 ft., completed in Stevens zone of Miocene age.

SAN JOAQUIN VALLEY OUTPOSTS

Belridge, Kern County: Belridge Oil Co. 55-26 fee, 26-27s-20e, drilling 9,771 ft. in gray siltstone and hard sand, this deep test is below top of productive Wagonwheel zone of Eocene age, top Eocene 9,545 ft., elev. 658 ft.

Buena Vista Hills, Kern County: Honolulu 25-P fee, 10-32s-24e, T.D. 14,622 ft., P.B. 11,093 ft., drill pipe stuck, spotted oil, recovered to 12,880 ft., scraping wall, elev. 916 ft.

Canal field, Kern County: Shell 44-14-A Kern County Land, 14-30s-25e, drilling in sand 6,282 ft., this will be first Vedder zone test in field.

Elk Hills, Kern County: Standard 42-31-S fee, 31-30s-24e, T.D. 8,021 ft. in shale, lost drill pipe, redrilling 6,010 ft., elev. 1,122 ft.

Standard 45-19-S fee, 19-30s-24e, drilling 9,740 ft. in sand and shale, elev. 707 ft.

Standard 76-33-S fee, 33-30s-24e, drilling 1,994 ft. in sand, elev. 996 ft.

Greeley, South, Kern County: A. N. Macrate 1 Haberfeld, 32-29s-26e, drilling 6,994 ft. in sand, elev. 338 ft.

Kern Front, Kern County: Richfield 1 Kraemer, 34-28s-27e, location staked.

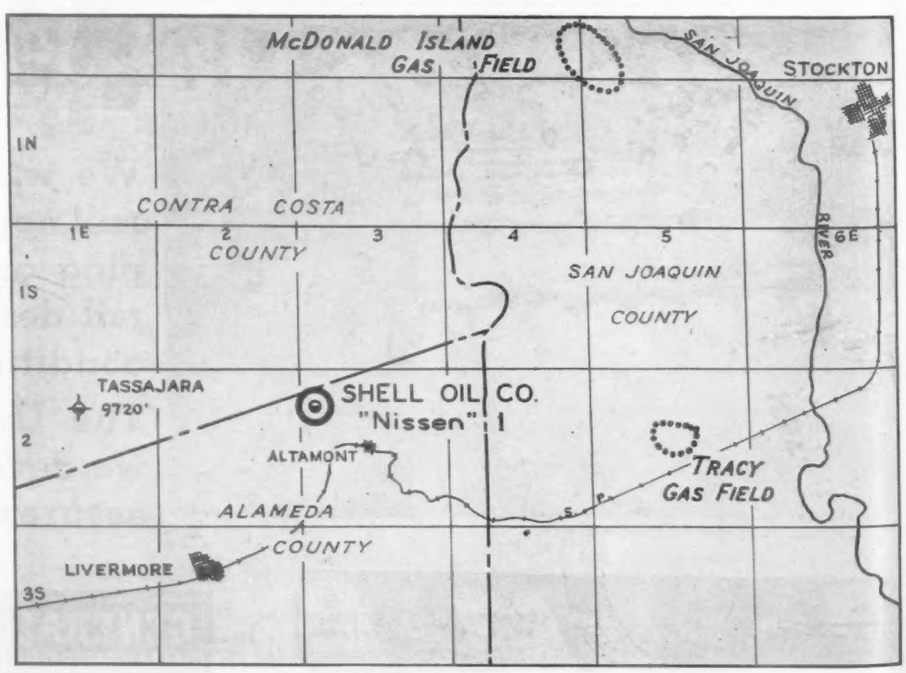
Kettleman North Dome, Kings County: Standard 1-1-U fee, 1-23s-18e, drilling 12,884 ft. in hard gray sand, showing considerable gas, drill pipe stuck on bottom, elev. 693 ft.

Midway-Sunset, Kern County: North Amer. Oil Consd. 1-28 W.P., 28-32s-23e, T.D. 8,398 ft. in shale with streaks of tight impervious sand and siltstone, 25° dips, elev. 1,560 ft.

Mountain View, Kern County: Richfield 1 Mountain View, 18-30s-28e, rigging up to spud.

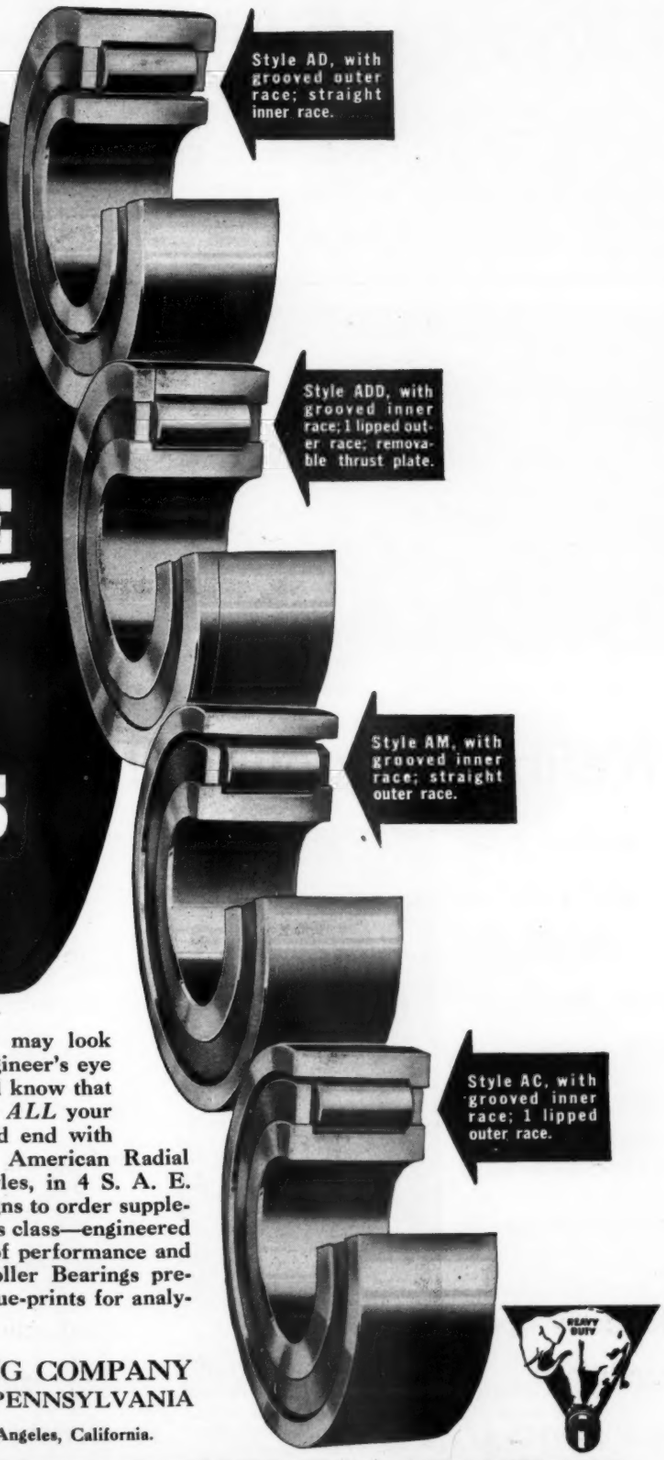
Union Avenue, Kern County: Hancock Oil Co. 1 Watts, 8-30s-28e, drilling 2,864 ft. in sand and shale.

Paloma, Kern County: Union 81 Morgan, 14-32s-26e,



Shell Oil Co., Inc., has started a wildcat in the Altamont district of Alameda County, California, southwest of the town of Stockton, shown above, circled

ONE SOURCE FOR A COMPLETE LINE OF RADIAL BEARINGS


Style AD, with grooved outer race; straight inner race.
Style ADD, with grooved inner race; 1 lipped outer race; removable thrust plate.
Style AM, with grooved inner race; straight outer race.
Style AC, with grooved inner race; 1 lipped outer race.

These American Radial Roller Bearings may look alike as peas in a pod to some. But an engineer's eye will spot the differences instantly. He will know that his search for *ONE* dependable source for *ALL* your radial bearing requirements can begin and end with AMERICAN! Recent additions to the American Radial Bearing line extend your choice to 5 styles, in 4 S. A. E. series, with a total of 85 sizes. Special designs to order supplement this wide range. Each is a leader in its class—engineered to equal or better self-imposed standards of performance and quality that have made AMERICAN Roller Bearings preferred the world around. Send us your blue-prints for analysis and recommendations.

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Pacific Coast Office: 1718 S. Flower St., Los Angeles, California.

AMERICAN *HEAVY DUTY* **ROLLER BEARINGS**

drilling 9,684 ft. in sandy shale, elev. 306 ft.
Western Gulf 12-7 Symons, 7-32s-27e, rigging up and preparing to spud.

SAN JOAQUIN VALLEY WILDCATS

Altamont district, Alameda County: Shell 1 Nissen, 7-2s-3e, drilling 1,453 ft. in sand, elev. 1,023 ft.
Burrell district, Fresno County: General Pet. 1 Burrell, 2-17s-18e, drilling 7,161 ft. in siltstone and gray sand, showing gas, elev. 210 ft.
Buttonwillow district, Kern County: Texas 47-15 Southern Pacific, 15-29s-24e, T.D. 12,138 ft., P.B. 4,700 ft., tested hard tight Stevens oil sand and shale, fair blow, fluid 90 per cent water and 5 per cent oil, will probably abandon, elev. 297 ft.
Superior 13 Kern County Land, 18-29s-25e, drilling and spot coring in sand and shale 12,511 ft., elev. 313 ft.
Bellevue district, Kern County: Ohio 1-G Kern County Land, 36-29s-26e, drilling 10,600 ft. in gray Vedder sand and shale below Stevens, top Rio Bravo zone 10,475 ft., top Vedder 10,512 ft., elev. 373 ft.
Chowchilla district, Madera County: Shell 74-9 Chowchilla Farms, 9-11s-14w, drilling 280 ft. in sand.
Dehli district, Yolo County: Amerada Pet. 1 Finance Constr. Co., 4-6n-3e, drilling 5,660 ft. in sand and shale, elev. 8 ft.
Ducor district, Tulare County: Texas 77-1 Graham & Loftus, 1-24s-26e, drilling in sand and shale 2,582 ft., elev. 465 ft.
Delano district, Kern County: Associated 46 Quinn, 8-25s-27e, drilling 1,764 ft. in sand, oil showing 1,450-1,530 ft., joint test with Union Oil Co., elev. 570 ft.
Dyer Creek district, Kern County: Shell 56-X-11, 11-26s-27e, location staked.
Helm district, Fresno County: Amerada 31-34 Clover, 34-16s-17e, drilling 5,280 ft. in sand and shale, elev. 203 ft.
Jacalitos district, Fresno County: Wilshire-Annex 33-26-E, rigging up and preparing to spud.
Lost Hills district, Kern County: Associated 46-16 fee, 16-27s-21e, drilling in sandy shale 6,545 ft., fishing drill pipe, elev. 424 ft.
Monocline district, Fresno County: Seaboard Oil Co. 2 Hagood, 6-17s-13e, drilling 4,263 ft. in Moreno shale, coring for Moreno sandstone, Eocene absent.
Panoche district, Fresno County: Richfield 1 Stone-Bragg, 33-13s-12e, drilling 3,061 ft. in sand.
Pyramid Hills district, Kings County: Pyramid Prod. Co. 2 Spreckles, 16-24s-18e, drilling in lower Temblor shale 1,870 ft., bentonite 344 ft., no showings to date, elev. 673 ft.
Raisin City district, Fresno County: Shell 28-18 Properties, Inc., 18-15s-18e, location changed to east of discovery well.
Reef Ridge, Kings County: Blair Oil Co. 1-B Ridge, 24-23s-16e, drilling 391 ft. in shale, elev. 1,380 ft.
Rio Vista district, Solano County: Standard 1 Suisun Comm., 36-4n-2w, drilling 3,415 ft. in sand and shale, objective is Cretaceous gas zone, formation test 2,755-2,830 ft., no blow.
Standard 1 Productive Prop., 23-3n-3e, rig.
Standard 2 State, 30-4n-3e, drilling 4,770 ft. in sand and shale, objective Cretaceous gas zone.
Superior 1 Larson, 8-3n-3e, drilling 4,300 ft. in sand, Emigh shale 3,515 ft., green sand 3,950 ft., cemented 5½-in. casing 4,300 ft., will gun perf.
Superior 1 McCormack, 9-3n-3e, driving piles for derrick foundation.
Rumsey Hills, Yolo County: Standard 1-1 Tipetts, 15-12n-3w, drilling in sand below 2,040 ft., elev. 1,480 ft.
Shafter district, Kern County: Continental 2-G Kern County Land, 35-27s-24e, drilling 12,835 ft. in sand and shale, elev. 327 ft.

COASTAL DISTRICT

Drilling & Exploration Co. established a new drilling record for depth in the Ventura Avenue field recently when it bottomed Ralph Lloyd's 8 Lloyd in the northeastern end of the field at 11,150 ft. Previous to this, Tide Water Associated's 7 Hartman which was bottomed at 11,070 ft. was the deepest producing well in the field. Despite the depth of these deep wells, the bottom of the holes is still in Pliocene rocks and all indications point to the probability that top of the Miocene will not be found much above 15,000 ft. This may vary one way or the other but in any event there should be as much or more of Miocene as there is Pliocene. Under present drilling conditions some of the probable deep zones in the Ventura Avenue field lie beyond the depth of the drill. With a 7-in. water string landed and cemented in Lloyd's well No. 8 at Ventura Avenue a formation test was made at 10,133-10,803 ft. and with the tester open for 2 hours the recovery was a good blow for 10 minutes and 69 stands of mud, gas, and oil.

Chanslor-Canfield Midway Oil Co. expects to be in a position to make production test on 9-C Hobson in the Rincon field of Ventura County within the next several days. This well, which appears to have found a highly productive zone, has been held up for several weeks with mechanical trouble that was only recently cleaned up by a redrilling job. This well, located in 17-3n-24w, was originally bottomed at 9,337 ft. but has been redrilled to 9,300 ft. A string of 6⅝-in. casing has been landed at 8,265 ft. and a string of 4¾-in. This is the deepest well drilled in the Rincon field to date and there is expectation of finding deep production. This is considered important because this field has never been a prolific one and if the new zone found by Chanslor-Canfield Midway Oil Co. proves as good as it looks one may anticipate aggressive deep drilling and the deepening of former upper-zone producers. One location away from 9-C Hobson the company is drilling ahead in 3-C Hobson in an oil sand at 8,250 ft. but since this well is correlating exactly with the former it may be carried down into the new deep zone instead of being completed around 8,500 ft.

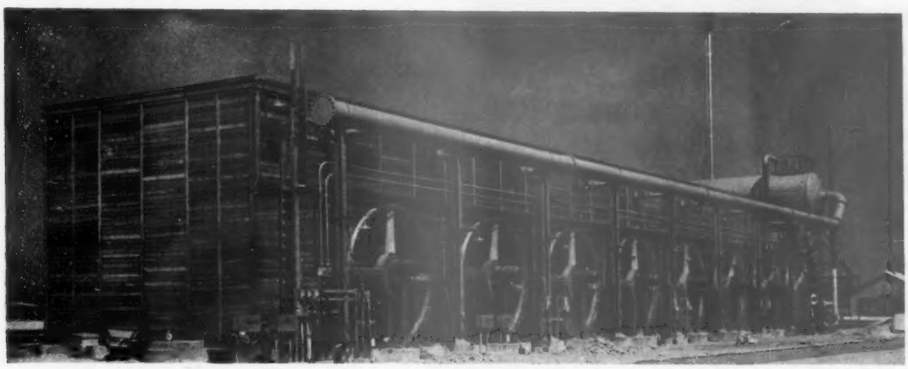
Petrol Corp. has made an agreement whereby it takes over for operation the Gilmore Oil Co.'s Roademite plant in the Cat Canyon district of Santa Barbara County and preparations are already under way to recondition equipment. This plant has a daily capacity of 1,500 bbl. and will use crude oil produced by Petrol Corp. in the Gato Ridge field located a few miles away. This deal has been made because of the impending scarcity of tankers which will become more critical as time goes on and which will probably prevent Petrol from moving Gato Ridge production to its southern California refinery.

COASTAL DISTRICT COMPLETIONS

Aliso Canyon, Los Angeles County: Associated 5 Porter, 28-3n-16w, flowed 2,105 bbl., 25.6-gravity, 0.6 per cent cut, 1,050,000 cu. ft. gas, 64/64-in. bean, pressures 100/250 lb., T.D. 6,075 ft., perf. 5,264-6,073 ft., completed in Modelo zone of Miocene age.
Newhall, Los Angeles County: Redwood Oil Co. 1 Mitchell, 22-4n-15w, abandoned as dry hole at 1,375 ft., no important showings of oil and gas.
Santa Maria Valley, Santa Barbara County: Bel-Air Oil Co. 1 Twitchell, 35-10n-34w, flowed 800 bbl., 13.9-gravity, 7 per cent cut, 128/64-in. bean, T.D. 5,375 ft., perf. 4,860-5,375 ft., completed in Monterey of Miocene age.
Hancock-Bush 3 Rosenblum, 25-10n-34w, flowed 2,880 bbl., 14.6-gravity, 3 per cent cut, 96/64-in. bean, pressures 150/250 lb., T.D. 4,609 ft., 180-mesh perf. 3,650-4,605 ft., completed in Monterey of Miocene age.
Ventura Avenue, Ventura County: Associated 30 V.L. &W., 24-3n-23w, flowed 241 bbl., 27.9-gravity, 1.1 per cent cut, 170,000 cu. ft. gas, 40/64-in. bean, pressures 180/450 lb., T.D. 7,100 ft., 300-mesh perf. 6,870-7,099 ft., deepened from 6,872 ft.

COASTAL DISTRICT WILDCATS

Aliso Canyon district, Los Angeles County: Associated 1 Mission, 26-3n-16w, drilling 1,883 ft. in sand, elev. 2,710 ft.
Castaic district, Los Angeles County: Texas 1 Newhall Land & Farming, 11-4s-17w, location staked.
Cat Canyon district, Santa Barbara County: A. E. Bell 1 Gilmore, 23-9n-33w, drilling 2,391 ft. in sand.
Camulos ranch, Ventura County: Western Gulf 1 Ru-

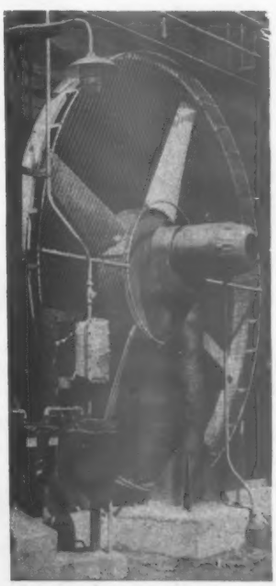


General view of 8-cell, low head, forced draft cooling tower in a southern oil refinery.

Refinery Cooling Towers

Low cooling costs and unfailing capacity are combined in low head, mechanical draft towers by Foster Wheeler.

In this case the number of fans to be operated depends upon the daily operating conditions.



Close-up of one of the 12 ft. diameter Axial Flow fans in the 8-cell tower illustrated above.

In cool weather the pitch of fan blades may be reduced to save power.

Conversely, full capacity of the tower is obtainable—regardless of wind or temperature—by driving all fans at normal speed.

Production is maintained, annual cost is minimum, and maintenance is virtually nil.

Foster Wheeler Corporation, 165 Broadway, New York, N. Y.

FOSTER WHEELER

bel, 22-4n-18w, drilling in sand and shale 1,463 ft., elev. 752 ft.

Elwood district, Santa Barbara County: Barnsdall-Richfield 88-12 State, tideland, drilling 3,373 ft. in sand and shale, elev. 21 ft.

Loma Grande district, Monterey County: Loma Grande Oil Co. 1 Corey, 23-24s-10e, T.D. 3,790 ft. in shale, fishing drill pipe, elev. 1,500 ft.

Los Flores district, Santa Barbara County: Standard 2 Los Flores, 27-9n-33w, drilling 6,465 ft. in oil sand and shale, shows considerable gas, cemented 7-in. casing 6,262 ft., elev. 1,084 ft.

Union 12 Bell, 27-9n-33w, building rig to drill offset to Standard's 2 Los Flores.

Newhall district, Los Angeles County: Aztec Oil Co. 1 Sanborn, 6-3n-16w, T.D. 4,300 ft. in Miocene sandy shale, moving in heavier equipment to resume work, elev. 1,516 ft.

Kenneth Oil Prod. Co. 1 Shepherd, 34-4n-15w, drilling 2,093 ft. in sand, elev. 2,000 ft.

St. Anthony Oil Co. 1 La Salle, 10-3n-16w, drilling 4,925 ft. in very hard brown shale, putting in heavier draw works and pipe, elev. 1,480 ft.

Tunnel Oil Co. 1 Needham, 13-3n-16w, drilling 1,530 ft. in hard conglomerate, expect production around 1,750 ft., elev. 1,681 ft.

R. W. Young 1 Walker, 11-4n-16w, drilling 2,198 ft. in hard sand and shale, oil and gas shows on ditch, elev. 1,254 ft.

Rincon, Ventura County: C.C.M.O. Co. 9-C Hobson, 17-3n-24w, T.D. 9,338 ft. in oil sand and sandy shale, redrilling 9,300 ft., lower part of first hole lost because of mechanical difficulties, elev. 49 ft.

C.C.M.O. Co. 3-C Hobson, 17-3n-24w, drilling 8,251 ft. in shale and oil sand, elev. 245 ft.

San Martinez district, Los Angeles County: Bankline Oil Co. 1 Videgain, 17-4n-17w, drilling 3,997 ft. in sand and shale, elev. 1,750 ft.

Standard 1 Sepulveda, 17-4n-17w, drilling 605 ft. in sand, elev. 1,359 ft.

Ohio 1 Vasquez, 17-4n-7w, drilling in sand and shale 1,891 ft., elev. 1,718 ft.

Towsley Canyon, Los Angeles County: Barnsdall and Ambassador Pet. Co. 1 Limebocker, 17-3n-16w, drilling in sand 1,183 ft., elev. 1,680 ft.

AVERAGE DAILY PRODUCTION

	Aug. 16	Aug. 9
Wilmington	86,525	85,525
Midway-Sunset	50,150	55,950
Coalinga	47,550	44,925
Kettleman North Dome	38,725	36,875
Long Beach	38,050	39,550
Ventura Avenue	36,825	36,050
Huntington Beach	33,175	32,910
Santa Fe Springs	24,225	23,775
Dominguez	23,775	24,550
Santa Maria Valley	15,375	14,250

LOS ANGELES BASIN

The Dominguez extension is rapidly passing out of the picture and within a short time the production of this area will be of small importance. Pressures are showing a consistent decline and the pumping stage is not far away. This may bring up some interesting results because of the limited amount of oil sand present. For several weeks the fluid level will probably be relatively high but as withdrawal continues the level decline will probably be rapid. Very few wells in this section of the Dominguez field have paid out which means that most of the wells drilled in the later stages of the flush period will only recover a part of drilling costs. There is a possibility that one well will be carried down to test out the productive possibilities of the eighth Callender zone but no definite decision has been reached. There is a chance that some production may be developed in the eighth Callender zone on the nose of the structure but this will be very restricted and limited to a narrow strip. Union Oil Co. has finished drilling up its offset requirements along the west side of the Austin lease and is now developing inside locations.

There was no special change in the status of deep-zone exploitation in the Inglewood field of Los Angeles County this week. R. R. Bush Oil Co. has suspended drilling operations on 1 Merchants at 8,872 ft. and the well will be carried on the idle list pending further developments. Drilling operations in the field have slowed up somewhat during the past few weeks but will pick up again as soon as Standard Oil Co. starts work on the Vickers lease and Oscar Howard and Jergins Oil Co. spud in new wells. The restraint of drilling in this field has been remarkable to date as it had been expected that operators holding potentially productive acreage would begin drilling within a short time after discovery of the deep Miocene zone. Most leases in this field provide that an operator must begin offset drilling whenever a well is completed within a specified distance of lease boundaries and to date most drilling has been limited to the northwestern end of the field.

LOS ANGELES BASIN COMPLETIONS

Huntington Beach, Orange County: D. D. Dunlap 17 H.B., 2-6s-11w, abandoned because of mechanical difficulties resulting from stuck drill pipe, T.D. 3,020 ft.

Eyer and Peters 1 Newland, 10-6s-11w, abandoned as dry hole at 3,750 ft., no important oil or gas showings.

H. C. Morton 1 Brooks, 34-5s-11w, pumped 50 bbl., 22.1-gravity, 12 per cent cut, T.D. 4,798 ft., gun perf. 4,513-55 ft., 4,644-75 ft., completed in Pliocene.

Union 9 Copeland, 34-5s-11w, pumped 113 bbl., 26.5-gravity, 2.3 per cent cut, T.D. 4,590 ft., perf. 3,480-4,134 ft., 4,198-4,587 ft., deepened from 4,138 ft. and recompleted in Pliocene.

Long Beach, Los Angeles County: Royalty Service Corp. 1 Burgess, 19-4s-12w, abandoned as dry hole at 9,074 ft. in basal Pliocene, no important showings logged.

Rosecrans, Los Angeles County: Midfield Oil Co. 1 Athens, 19-3s-13w, abandoned as dry hole at 9,486 ft. in Miocene, substantially below productive O'Dea zone, minor showings of oil and gas failed to produce commercially.

Wilmington, Los Angeles County: Continental Dev. Corp. 16 Harbor, 32-4s-13w, pumped 336 bbl., 14.2-gravity, 1.5 per cent cut, T.D. 3,112 ft., perf. 2,807-3,107 ft., completed in Ranger zone.

Crevolin and Moberg 1 Harbor, 32-4s-13w, pumped 135 bbl., 15.2-gravity, 10 per cent cut, T.D. 3,710 ft., perf. 2,999-3,305 ft., 3,344-3,710 ft., completed in Ranger zone.

C. R. Devine 1 Harbor, 33-4s-13w, pumped 72 bbl., 15.9-gravity, 2 per cent cut, T.D. 5,660 ft., redrilled to 3,395 ft., whipstocked from 2,672 ft. and landed liner with perf. 3,074-3,393 ft., recompleted in Ranger zone.

Johnston Drlg. Corp. 41 Harbor, 29-4s-13w, pumped 100 bbl., 14.1-gravity, 5 per cent cut, T.D. 3,623 ft., perf. at intervals 3,406-3,623 ft., completed in Ranger zone.

Petromont Oil Corp. 2 Wilmington, 32-4s-13w, pumped 80 bbl., 14.2-gravity, 20 per cent cut, T.D. 3,720 ft., gravel-packed perf. 3,133-3,720 ft., completed in Ranger zone after gravel packing.

Selegna Pet. Corp. 12 Harbor, 32-4s-13w, pumped 175 bbl., 13.9-gravity, 3.2 per cent cut, T.D. 3,640 ft., redrilled to 3,630 ft., perf. 2,688-2,858 ft., 2,943-3,176 ft., 3,280-3,629 ft., recompleted in Ranger zone after gravel packing.

Union Pacific R. R. 193 fee, 3-5s-13w, flowed 1,278 bbl., 22.7-gravity, 0.4 per cent cut, 48/64-in. bean, pressures 100/400 lb., T.D. 2,896 ft., 60-mesh perf. 2,557-58 ft., 2,580-2,637 ft., 2,657-2,896 ft., completed in Ranger zone with gravel-packed formations.

LOS ANGELES BASIN OUTPOSTS OR DEEP TESTS

Dominguez, Los Angeles County: Hileford Associates 1 Developers, 29-3s-13w, drilling 5,997 ft. in sand.

Clareborn Oil Co. 1 Hiles, 29-3s-13w, rigging up and preparing to spud.

Hiles Crawford and Associates 1 Willis, 29-3s-13w, tested wet 3 times at 7,253 ft., cleaned out to 7,247 ft., plugged to 7,233 ft., installing compressor, elev. 35 ft.

Inglewood, Los Angeles County: R. R. Bush Oil Co. 1 Merchants, 7-2s-14w, T.D. 8,872 ft. in sandy shale, checking log, elev. 190 ft.

R. R. Bush Oil Co. 1 Smith, 7-2s-14w, T.D. 8,673 ft. in sand and shale, Nodular shale 8,100 ft., fishing sand line and swab, elev. 185 ft.

Federal Oil Co. 3 Smith, 7-2s-14w, rigging up and preparing to spud.

Hogan Pet. Co. 2-A Machado, 7-2s-14w, drilling 5,984 ft. in sand and shale.

(Continued on Page 82)

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KENNEDY
Extra Value in VALVES

Production Moved 35 Miles North By Lubbock Strike

By R. MARNE SANFORD

MIDLAND, Tex., Aug. 18.—At the end of the week the L. C. Harrison 1 Nairn estate, Section 25, Block A, John Gibson Survey, first reported as a dry hole, apparently instead had assured Lubbock County its first oil production. If this prospect, which is 3½ miles northeast of the city of Lubbock, is completed for oil production, it will be the most northern strike in the North Permian basin of West Texas. The nearest production is 35 miles southwest in the Hockley County portion of the Slaughter pool.

Approximately 10 days ago the wildcat aroused the interest of operators when a core from 4,881-91 ft. recovered saturated lime with slight porosity. However, when swabbed the test returned only a small amount of gas and no oil. Rotary equipment was replaced by cable tools and operator prepared to deepen to contract depth of 5,000 ft.

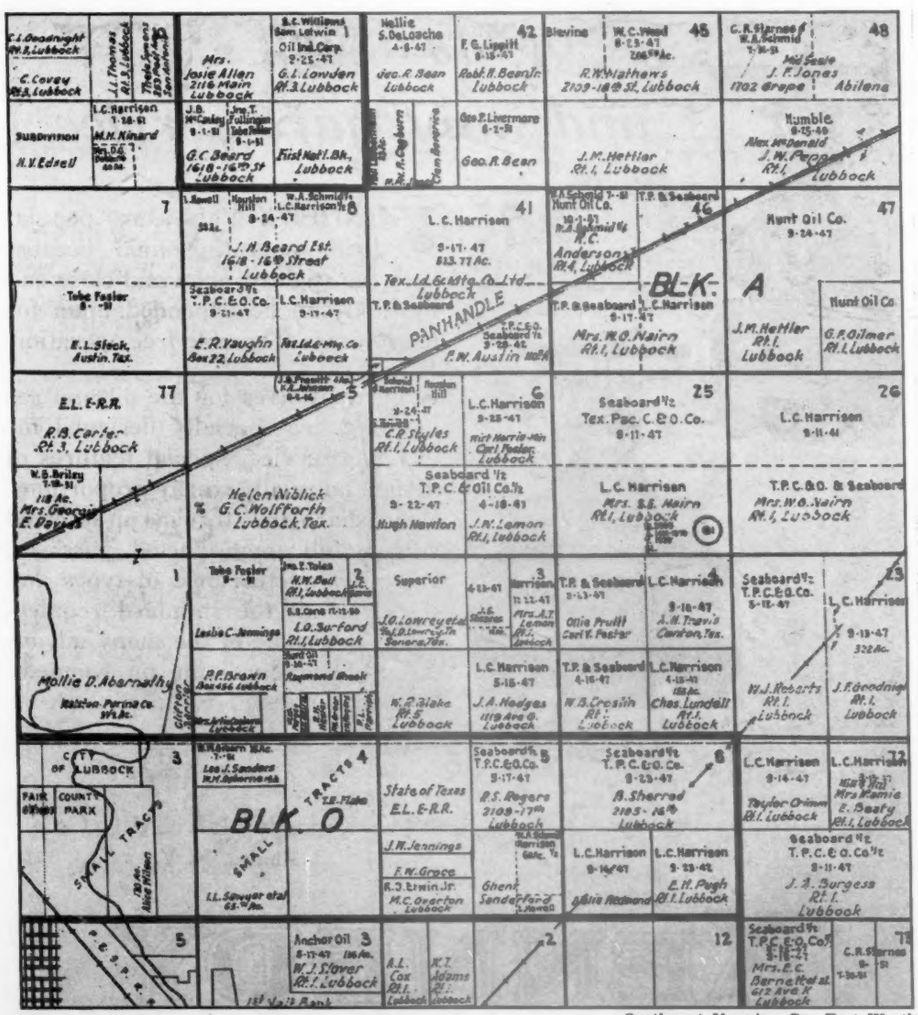
At 4,905 ft. a porous saturated lime, which geologists have identified as the Clear Fork, corresponding to the Tubb horizon in the Tubb area of Crane County, was encountered and drilled to 4,916 ft., total depth. The test was acidized with 2,000 gal. and is now swabbing 10 to 15 bbl. of 31 to 32-gravity oil per hour.

The wildcat was drilled on a 3,600-acre farmout obtained from the Texas Pacific Coal & Oil Co. and Seaboard Oil Corp. The farmout is a part of a 7,400-acre block held jointly by the two firms.

Two Deep Wildcats Staked in Northern Area

Two deep wildcats were announced for the northern basin area during the week. In Andrews County an Ellenburger exploratory test will be drilled by Fullerton Oil Co. of Los Angeles as 1 Wilson. The 8,500-ft. venture has been staked in Section 15, Block A-32, P.S.L. Survey. There are failures on three sides of the site which were drilled to the Permian lime zone but this will be the first test of the Ellenburger in the area.

In extreme western Gaines County the Tubb horizon will be tested by a 7,200-ft. wildcat staked this week by Tom Sloan, Jr. The test will be drilled in the NW Section 13, Block A, P.S.L. Survey.



Southwest Mapping Co., Fort Worth

First oil production for Lubbock County and the most northern in the North Permian basin of West Texas is showing in L. C. Harrison 1 Nairn estate, 5½ miles northeast of Lubbock. No. 1 Nairn is swabbing 10 to 15 bbl. oil per hour from a total depth of 4,916 ft.

Tubb production was first discovered in the Tubb area of western Crane County. Later the Amon Carter 5-D Wasson in the Wasson pool of Gaines County found production from that level. Also, Tubb production has been found 4 miles east of the Abell pool of northern Pecos County. The Sloan test is 12 miles east and slightly south of the Amon Carter Wasson producer.

Emma Pool Again Given Slight Extension

One-quarter mile east of the Adams & Bradley 1-A University, which recently extended the Emma pool of southern Andrews County ½ mile southeast, the some operators have completed 2-A University. On official gage the well rated a potential of 1,101.76 bbl. of 35-gravity oil. Gas-oil ratio is 800 to 1.

Pay was topped at 4,216 ft. and drilled to 4,290 ft. Production followed a 1,500-gal. acid treatment. Location is 330 ft. from the north and 990 ft. from the west lines of Section 43, Block 9, University Survey.

NORTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gage)

Cedar Lake, Gaines County: Stanolind 5 American Warehouse, 848 bbl., 810-qt. shot, 4,585-4,746 ft.
Stanolind 6 American Warehouse, 945 bbl., 905-qt. shot, 4,560-4,740 ft.
Stanolind 6 Johnson, 670 bbl., 530-qt. shot, 4,600-4,728 ft.
Dockery-Robbins, Mitchell County: F. W. Merrick 1 Strain, 216 bbl., 560-qt. shot, 1,655-1,790 ft.
Emma, Andrews County: Adams & Bradley 2-A University, 1,102 bbl., 1,500 gal. acid, 4,216-90 ft.
Seminole, Gaines County: Amerada 1 Brown, 323 bbl., ½-in. choke, 110-qt. shot, 5,178-5,250 ft.
Amerada 1-A Averitt, 571 bbl., ½-in. choke, 120-qt. shot, 5,180-5,260 ft.
Sharon, Scurry County: Pearson & Sibert 4 Bishop, 132 bbl., 275-qt. shot, 2,385-2,458 ft.
Slaughter, Cochran County: Atlantic 19 Boyd, 1,157 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,938-5,005 ft.
Devonian Oil 4-B Duggan, 371 bbl., 2½-in. casing outlet, 12,000 gal. acid, 5,020-67 ft.
Devonian Oil 7-B Duggan, 384 bbl., 2½-in. casing outlet, 11,500 gal. acid, 5,024-64 ft.
Devonian Oil 8-B Duggan, 941 bbl., 2½-in. casing outlet, 20,500 gal. acid, 5,023-85 ft.
Devonian Oil 2-A Igoe Smith, 737 bbl., open casing, 11,250 gal. acid, 4,952-5,000 ft.
Honolulu Oil 7-A Mallett, 1,505 bbl., 2-in. casing outlet, 10,000 gal. acid, 5,043-76 ft.
Slaughter, Hockley County: Delta Drlg. 3-C Slaughter, 319 bbl., 4.2 per cent water, 10,000 gal. acid, 4,895-4,947 ft.
Delta Drlg. 1 Veal-Slaughter, 1,137 bbl., open casing, 10,000 gal. acid, 4,885-4,995 ft.
Delta Drlg. 1 Tode, 994 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,860-4,957 ft.
Delta Drlg. 2 Tode, 591 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,879-4,969 ft.
Honolulu 18-B Slaughter, 1,667 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,920-95 ft.
Honolulu 19-B Slaughter, 882 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,920-90 ft.
Magnolia 4-D Mallett, 954 bbl., 3-in. casing outlet, 10,500 gal. acid, 4,944-5,002 ft.
Magnolia 7-J Mallett, 1,462 bbl., 3-in. casing outlet, 10,000 gal. acid, 4,960-5,022 ft.
S. W. Richardson 18-B Slaughter, 1,399 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,875-4,980 ft.
Skelly Oil 3 Lincoln, 1,438 bbl., 3-in. casing outlet, 9,000 gal. acid, 1,000 gal. butane, 4,875-4,982 ft.
Stanolind 18-A Slaughter, 1,159 bbl., 3-in. casing outlet, 10,000 gal. acid, 4,908-5,030 ft.
Texas 8-E Mallett, 1,330 bbl., 10,000 gal. acid, 4,950-5,038 ft.
Slaughter, Terry County: Gulf 8 Mallett, 1,218 bbl., 8,500 gal. acid, 5,005-25 ft.
Wasson, Gaines County: Continental 1-47 Moore, 916 bbl., 1-in. choke, 12,000 gal. acid, 4,930-90 ft.
Continental and Carter 12-48 Wasson, 1,148 bbl., 1-in. choke, 12,000 gal. acid, 4,910-67 ft.
Wasson, Yoakum County: Aloco Oil 5 Knight, 398 bbl., ¼-in. choke, 10,000 gal. acid, 4,955-5,282 ft.
Denver Prod. 27 Whittenberg, 1,181 bbl., 10,000 gal. acid, 4,890-5,141 ft.
Skelly Oil 4 Comer, 518 bbl., 1-in. choke, 11,000 gal. acid, 5,000-5,220 ft.

NORTHERN WEST TEXAS ACTIVE WILDCATS

Andrews County: Mascho Oil 1 Texas-University, Sec. 11, Blk. 13, University Sur., T.D. 4,933 ft., sulfur wtr.
Mascho Oil 1 Fisher, NE NE SE Sec. 16, Blk. 36-A, P.S.L. Sur., prepare to acidize, T.D. 4,602 ft., recemented back to 4,590 ft., testing.
Furhman Pet. 1 Seidel, Sec. 6, Blk. 42-A, P.S.L. Sur., drilling 3,890 ft.
Borden County: Coffield & Guthrie 1 Conrad, SE NW Sec. 79, Blk. 20, Lavaca Navigation Co. Sur., 7-in. 3,305 ft., drilling 3,350 ft.
M. L. Richards 1 Drum, Sec. 307, Blk. 97, H.&T.C. Sur., drilling 1,870 ft.
Cochran County: O'Neal Drilling Co. 1 Wright, NE cor. Lbr. 12, Lge. 60, Martin C.S.L. Sur., 3 mi. N of Dean area, swabbed 60 bbl. fluid in 8 hr., 20 per cent basic sediment and sulfur water, perf. casing 4,835-80 ft., 5,000 gal. acid, swabbed 15 bbl. oil in 25 min. then died.
Dawson County: Stanolind 2 Scanlan, 660 ft. from S and E lines Sec. 87, Blk. M, E.L. Sur., drilling 3,250 ft.
Gaines County: Amon G. Carter 4-D Wasson, NW SE Sec. 50, Blk. AX, P.S.L. Sur., set 5½-in. casing at 10,615 ft., T.D. 11,108 ft., tight well, no report.
Garza County: Ed McAdams 1 K. Stoker, 1,320 ft. from S and E lines NE¼ Sec. 942, Blk. 97, H.&T.C. Sur., 3,500-ft. test, fishing tools 2,528 ft.
Lubbock County: L. C. Harrison 1 Nairn, Sec. 25, Blk. A, John H. Gibson Sur., 7-in. at 4,857 ft., T.D. 4,916 ft., swabbing and testing after acid.
Lynn County: Uscan Drilling Co. (formerly Ross Sport) 1 J. E. Rice, 660 ft. from N and W lines Sec. 18, Blk. 11, E.L. Sur., drilling by junk 4,891 ft.
Mitchell County: G. R. Anderson 1 Simpson, 2,310 ft. from S and 330 ft. from E lines Sec. 65, Blk. 97, H.&T.C. Sur., drilling 998 ft.

Humble 1 Ellwood, 1,980 ft. out of E cor. Sec. 49, Blk. 16, S.P Sur., 8,500-ft. test, drilling 500 ft.
Motley County: Humble 1-D Matador, Sec. 127, Gibson Sur., 6,000-ft. test, first report.
Yoakum County: Shell 1 Hammer, Sec. 490, Gibson Sur., 4½-in. 5,235 ft., prepare to drill into pay.

Outpost May Link Apco And Olson-McCandless

More information can now be expected on the Olson & McCandless area of extreme northern Pecos County, 2 miles southwest of production in the Apco field. Anderson-Prichard 1 Boren, ½ mile west of the Olson & McCandless area, was flowing an estimated 200 bbl. of oil per day while fishing for perforating gun.

Operators had set 5½-in. casing at 4,812 ft., total depth, and perforated the casing with 48 shots in the saturated Ellenburger lime section from 4,783-91 ft. The hole filled 1,500 ft. with oil. At last reports operators were considering acid treatment before attempting completion.

It is thought by some that the Olson & McCandless area is merely an extension of the Apco pool. However, the general consensus of opinion is that it is a separate area. The completion of 1 Boren may help to answer the question. Location is 1,979 ft. from the south and 660 ft. from the east lines of Section 4, Block 605, L. Merchant Survey.

Abell, Waddell Fields Look for Extension

In the Abell area of northern Pecos County two deep oil strikes were in prospect. The Magnolia 1 State-Young, in the SW cor. Section 4, Block 3, H.&T.C. Survey, was showing for a ¾-mile east extension to the field. On a 6-minute drill-stem test from 5,142-46 ft. the test flowed an estimated 50 bbl. of oil per hour with gas set at 750,000 cu. ft. At the end of the week, operator was setting 7-in. casing at 5,142 ft.

On the extreme south side of the pool, the Sinclair Prairie 1 Silverman, Section 10, Block 3, H.&T.C. Survey, had cored 19 ft. of pay sand from 5,189-5,208 ft. and was bottomed at 5,240 ft. At last reports preparations were being made to run an electrical log.

A short ¼-mile south extension for the Waddell pool of northern Crane County appeared assured with the Gulf 44 Waddell swabbing 237 bbl. of oil in 6 hours. The test started flowing and made 18 bbl. of oil in 15 minutes before being shut in to run tubing. Pay was topped at 3,458 ft. and drilled to 3,492 ft., total depth.

SUMMARY OF COMPLETIONS

Northern West Texas

	No.	Bbl.	Footage
Oil: Cedar Lake	3	2,463	14,214
Seminole	2	894	10,510
Slaughter	19	19,645	95,159
Wasson	5	4,151	25,600
Other fields	3	1,450	8,538
Total	32	.....	154,021

Southern West Texas

	No.	Bbl.	Footage
Oil: Goldsmith	3	1,381	12,725
Johnson	2	1,110	8,266
Keystone	5	1,772	16,554
North Cowden	2	793	8,722
O'Brien	3	1,775	8,221
Waddell	3	5,302	14,781
Other fields	5	7,204	16,473
Dry: Wildcats	5	.....	8,783
Total	28	.....	94,525

Texas Panhandle

	No.	Bbl.	Footage
Oil wells	17	3,399	50,567

Southeast New Mexico

	No.	Bbl.	Footage
Oil wells	4	241	13,952
Gas wells	1	*11	965
Dry holes	3	.....	12,349
Total	8	.....	27,266

*Million cu. ft. gas.

Two Sutton County Wildcats to Resume Drilling

Exploration of the Ellenburger lime is scheduled for two wildcats in Sutton County. M. C. Moore has taken from S. B. Roberts 1 Allison, which was drilled to 780 ft. and shut down. The test will be drilled to 4,700 ft. Location is in Section 44, Block K, G.H.&S.A. Survey.

After a year's shut down, drilling is being resumed on the Dominion Oil Co. 1 Allison, which caught fire and was junked after a light show of oil and production of gas gaged at 1,780,000 cu. ft. daily. At the present time total depth is 1,098 ft. The Dominion Oil 1 Allison is in Section 91, Block 9, T.W.&N.G. Survey.

SOUTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gage)

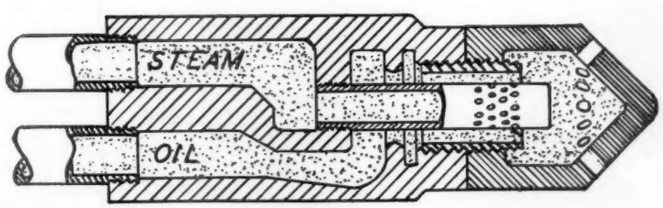
Wildcats

Crockett County: Moore & Olsen 1 Halff, 1,200 ft. from S and 4,900 ft. from E lines Sec. 27, Blk. 1, I.&G.N. Sur., dry at 1,036 ft.
Culberson County: C. Cothum 1 Casey-Rounsaville, dry at 1,295 ft.
Pecos County: Phillips 2 Nutt, 1,980 ft. from W and S lines Sec. 17, Blk. 125, T.&St.L. Sur., dry at 2,584 ft.
Thomasson Prod. 1 Perry, dry at 1,943 ft.
M. D. Bryant 1 Hogan, dry at 1,925 ft.

Fields

Abell, Pecos County: Magnolia and Stanolind 3 Tex-Mex McKee, 1,244 bbl., ½-in. choke, 5,384-94 ft.
Baker, Upton County: Miami Oil 2 Bowen, 129 bbl., 2,000 gal. acid, 2,277-2,362 ft.
Goldsmith, Ector County: Gulf 363 Goldsmith, 627 bbl., 1,000 gal. acid, 4,193-4,254 ft.
Gulf 364 Goldsmith, 105 bbl., 2-in. casing outlet, 67-qt. shot, 4,195-4,227 ft.
Gulf 265 Goldsmith, 649 bbl., 4,000 gal. acid, 4,185-4,244 ft.
Johnson, Ector County: J. L. Greene 2 Martin, 282 bbl., 1-in. choke, 690-qt. shot, 3,900-4,126 ft.
Texas 2 Johnson, 528 bbl., ½-in. choke, 880-qt. shot, 4,040-4,140 ft.
Jordan, Crane County: Gulf 27 Henderson, 4,752 bbl., 5,000 gal. acid, 3,512-52 ft.
Keystone, Winkler County: M. J. Bashara & Sons 6 fee, 286 bbl., 23/64-in. choke, 630-qt. shot, 3,062-3,252 ft., T.D. 3,264 ft.
J. R. Sharp 6 Jenkins-Gulf, 312 bbl., ½-in. choke, 250-qt. shot, 3,303-87 ft.
Standard 25-12 Baird, 628 bbl., 300-qt. shot, 3,250-78 ft.
Texas 3 Campbell, 295 bbl., 520-qt. shot, 3,085-3,280 ft.
Texas 4 Campbell, 251 bbl., 340-qt. shot, 3,209-3,345 ft.
McElroy, Upton County: Gulf 54 McElroy, 949 bbl., 410-qt. shot, 2,930-3,017 ft., T.D. 3,022 ft.
North Cowden, Ector County: Forest Dev. 1 Henderson, 176 bbl., 420-qt. shot, 5,000 gal. acid, 4,200-4,340 ft., T.D. 4,365 ft.
M. A. Grisham 2 Henderson, 617 bbl., 520-qt. shot, 4,218-4,357 ft.

JOHN ZINK BURNERS



John Zink MT Oil Burner

This burner has just been tested by the engineers of one of the largest refineries on the Pacific Coast with the use of special meters, metering the fuel oil, etc. and it came out on top of all the burners tested as regards to wide range and ability not to snuff out under low loads and high draft.

The MT Steam Atomizing Oil Burner features a multiple tangentially drilled steam nozzle, which not only atomizes but spins the atomized oil. This procedure assures equal distribution of the fuel to all burner tip ports.

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O'Brien Ward County: Gulf 179 O'Brien, 99 bbl., 176-qt. shot, 2,620-68 ft.
Gulf 181 O'Brien, 1,077 bbl., 400-qt. shot, 2,645-2,750 ft., T.D. 2,782 ft.
Gulf 182 O'Brien, 599 bbl., 410-qt. shot, 2,640-2,750 ft., T.D. 2,771 ft.
Waddell, Crane County: Gulf 25 Waddell, 2,451 bbl., 5,000 gal. acid, top Ellenburger 5,488 ft., pay 5,614-51 ft.
Gulf 27 Waddell, 2,502 bbl., 5,000 gal. acid, 4,349-4,561 ft.
Magnolia 3 Lee, 349 bbl., 7,500 gal. acid, 4,388-4,569 ft.
White & Baker, Mitchell County: Cardinal Oil 1-K White & Baker, 130 bbl., 1-in. choke, 100-qt. shot, 2,120-43 ft.

SOUTHERN WEST TEXAS ACTIVE WILDCATS

Brewster County: Chester Dewey 1 Decie, 660 ft. from N and 1,980 ft. from S lines Sec. 45, Blk. 4, G.C. &S.F. Sur., 3,000-ft. test, cementing crevice at 185 ft., S.D.
Crane County: Gulf Oil 1-B Tubb, 660 ft. from W and S lines Sec. 28, Blk. B-27, P.S.L. Sur., drilling 4,212 ft.
Crockett County: R. H. Henderson 1 Couch, 467 ft. from N and 2,173 ft. from E lines Sec. 37, Blk. GG, H.E.&W.T. Sur., drilling 1,979 ft.
Forest Dev. 1 Shannon, 467 ft. from W and S lines Lot 20, Lge. 2, Archer Co. Sch. Lds. Sur., 2,600-ft. test, drilling 750 ft.
Amerada 1-C Todd, 660 ft. from W and S lines Sec. 15, Blk. 10, G.C.&S.F. Sur., drilling 3,000 ft.
E. S. Hitchcock 1-A Noelke, 467 ft. SW and NW NE¼ Sec. 1949, Blk. 31, Steisser Sur., drilling 525 ft.
E. S. Hitchcock 1-B Noelke, 467 ft. NW and NE SW¼ Sec. 1950, Blk. 31, Steisser Sur., spud and S.D.
Moore & Olson 1 Halff, 1,200 ft. from S and 4,900 ft. from E lines Sec. 54, Blk. 1, I.&G.N. Sur., drilling 3,418 ft.
Culberson County: John Wolfe 1 Wilson-Briggs, 2,316 ft. from N and 1,500 ft. from E lines Sec. 1, Blk. 112, W. N. Olden Sur., Delaware sand test, spud and S.D.
Loving County: Pinal Dome Oil 1 Michigan Oil fee, NW SW Sec. 15, Blk. 26-C, P.S.L. Sur., 5,300-ft. test, S.D. 5,373 ft.
Pecos County: J. D. Lancaster 1-32 University, 2,310 ft. from S and 330 ft. from E lines Sec. 26, Blk. 16, University Lands Sur., drilling 450 ft.
Gulf 1 Millar, Sec. 29, Blk. 11, H.&G.N. Sur., drilling 2,930 ft.
Cremin & Boren 1 Bowen, 2,310 ft. from NW and 1,650 ft. from NE lines Sec. 60, Blk. 10, H.&G.N. Sur., 2,100-ft. test, 7-in. at 1,022 ft., drilling 1,651 ft.
A. Hargrove 1 Univ.-Continental, NE cor. Sec. 4, Blk. 7, University Sur., P.B. to 1,500 ft., T.D. 1,746 ft., shut down.
Phillips 2 Nutt, 1,980 ft. from W and S lines Sec. 17, Blk. 125, T.&St.L. Sur., 2,500-ft. test, shut down 2,584 ft.
Redmond, Greene & Davis 1 Iowa Trust, E¼ W¼ Sec. 29, Blk. 10, H.&G.N. Sur., P.B. to 1,850 ft. to test from 6,010 ft.
Reagan County: Amerada 1-RA University, 1,980 ft. from N and 600 ft. from E lines Sec. 3, Blk. 48, University Sur., drilling 9,327 ft.
Terrell County: E. M. Thomason 3 Bates, NE Sec. 30, Blk. 1, I.&G.N. Sur., drilling 1,704 ft.
Upton County: Plymouth Oil 2 Alford, C Sec. 50, Blk. 12, P. B. Scott Sur., drilling 7,120 ft.
Ward County: J. E. Fitzpatrick 1 T. B. Pruitt, SW SW Sec. 23, Blk. 1, W.&N.W. Sur., still fishing, T.D. 1,510 ft.
Shell Oil 1 Sealy-Smith, 2,310 ft. from S and 330 ft. from E lines Sec. 38, Blk A, G.M.M.B.&A. Sur., Ordovician test, drilling 3,302 ft.
Winkler County: Magnolia 20 States-Walton, NW cor. Sec. 4, Blk. 3-B, P.S.L. Sur., based Permian 7,630 ft., drilling 7,976 ft.
Sam Weiner 2 Halley, NW NE Sec. 7, Blk. 11-B, P.S.L. Sur., T.D. 3,023 ft., prepare to complete as gas well.

TEXAS PANHANDLE

AMARILLO, Tex., Aug. 18.—Completions in this district held to their above-the-average pace with the announcement of 17 oil producers completed during the week. There were no dry holes and no wells completed for gas. The total daily potential of the new wells amounted to 3,295 bbl.

New locations showed a drop from the 32 of the previous week to 16 for this week. The new tests were well scattered throughout the proven field. Gray County got 4, Hutchinson County 10, and Moore and Wheeler counties 1 each.

TEXAS PANHANDLE COMPLETIONS

(24-hr. pumping gages)

Gray County

Coronado Oil 3 Davidson "B," 214 bbl., 130-qt. shot, 3,050-3,140 ft.
Garber & Fagans 1 Lovett, 74 bbl., 720-qt. shot, 2,809-2,915 ft.
Sinclair Prairie 9 Coomly, 205 bbl., 220-qt. shot, 2,809-2,915 ft.
Skelly 129 Schaffer, 444 bbl., 367-qt. shot, 3,205-75 ft.
Stanolind 18 Merten, 43 bbl., 270-qt. shot, 3,227-3,333 ft.
W. H. Taylor 1 fee, 124 bbl., 570-qt. shot, 1,000 gal. acid, 2,832-84 ft.
Dawson & Tharp 1 J. A. Hood, 200 bbl., 725-qt. shot, 2,992-3,068 ft.

Hutchinson County

Gulf Oil 103 Dial, 246 bbl., 350-qt. shot, 2,885-2,980 ft., T.D. 2,990 ft.
Phillips 75 Cockrell Ranch, 189 bbl., 200-qt. shot, 2,837-2,915 ft., T.D. 2,935 ft.
Phillips 5 H. R. Lizzie, 148 bbl., 180-qt. shot, 3,180-3,255 ft.
Power Pet. Co. 10 Haile, 258 bbl., 395-qt. shot, 2,987-3,035 ft.
Shell Oil 26 Harvey "B," 337 bbl., 160-qt. shot, 3,015-76 ft.
Stanolind 26 Terry, 236 bbl., 467-qt. shot, 2,930-84 ft.
Texas 35 Pond, 328 bbl., 210-qt. shot, 2,965-3,050 ft.
Texas 18 Quinn, 172 bbl., 250-qt. shot, 3,010-91 ft.

Wheeler County

Smith Bros. Ref. and Hanlon & Buchanan 10 Johnson, 42 bbl., 2,425-58 ft., T.D. 2,510 ft.
Smith Bros. Ref. and Hanlon & Buchanan 11 Johnson, 35 bbl., 50-qt. shot, 2,090-2,100 ft., T.D. 2,111 ft.

SOUTHEAST NEW MEXICO COMPLETIONS

Wildcats

Eddy County: Sudderth 1 Wills, NW SE 14-20s-28e, 11,000,000 cu. ft. gas, T.D. 965 ft.
Lea County: Fullerton Oil 1 State, NE SE 18-16s-33e, dry at 5,060 ft.
Barefield & Phipps 2 Stroup, SW NE 12-18s-32e, dry at 4,112 ft.

Fields

Eaves, Lea County: Gulf 2 Vinson Ramsey, SE NE 12-26s-36e, dry at 3,177 ft.
Jackson, Eddy County: Danciger Oil & Ref. 12-A Turner, NE NE 19-17s-31e, 100 bbl., T.D. 3,399 ft.
Maljamar, Lea County: Drlg. & Explor. 2-B Johns, NW SW 24-17s-32e, 60 bbl. in 4 hr., T.D. 4,307 ft.
Cockburn 10-A Pearsall, SW NW 33-17s-32e, 73 bbl. in 2½ hr., T.D. 3,406 ft.
Red Lake, Eddy County: Herbert Aid 1 Wentz, SW NE 24-17s-28e, 8 bbl., T.D. 2,840 ft., P.B. 910 ft.

West Central Texas Fields

(Continued from Page 73)

935 ft. from S lines, Sec. 86, Blk. 12, T.P. Sur., 1,350-ft. cable-tool test, S.D. 956 ft.
J. B. Young 2 Elliott, 450 ft. from N and 1,650 ft. from E lines, Sec. 45, B.O.A. Sur., 750-ft. cable-tool test, location.
Somerville County: Plymouth Oil 1 Cousins, 456 ft. from SE and NE lines of tract in John Echols Sur., drilling 4,408 ft.
Stephens County: C. Andrade III 1 Walls Pasture, NE cor. Sec. 13, O.A.L. Sur., 7,500-ft. test, still S.D. at 4,170 ft.
T. S. Schroeder 1 Corvett, 2,200 ft. from E and 444 ft. from N lines, Sec. 12, Blk. 3, S.P. Sur., underreaming 8¾-in. casing, T.D. 2,422 ft.
T. G. Shaw 1 Stroud B, 330 ft. from N and 660 ft. from E lines, SW¼ Green Newton Sur. A-128, 4,250-ft. test, drilling 1,192 ft.
Stonewall County: Shell 1-A Patterson, 1,650 ft. from N and 990 ft. from W lines, Sec. 357, Blk. D, H.&T.C. Sur., Ellenburger test, drilling 1,370 ft.
Taylor County: Ce-Beth Oil 1 City of Abilene, south shore of Lake Abilene on city property, S.D. 4,100 ft.
Lewis Prod. 1 Huddleston, 330 ft. from N and W lines, Lot 6, Grimes C.S.L. Sur. 124, 2,850-ft. cable-tool test, drilling 930 ft.

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APPALACHIAN FIELDS

Price Increase May Boost Exploration and Drilling

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 18.—The increase of 23 to 25 cents a barrel in the price structure of Pennsylvania Grade crude, it is hoped, will act as an incentive for increased activity in the known oil areas both in cleaning out old wells and in added drilling. There is also some indication that it may stimulate additional semiwildcats. At the present time, production is falling behind the refinery demand and this winter with curtailed runs due to climatic conditions, it is very probable that the industry may feel the effects of it in a modified shortage which would curtail any possible expansion, however great the need.

On Chestnut Ridge in South Union Township, Fayette County, Peoples Natural Gas Co. has reached 6,300 ft. in 4 Piedmont Coal Co. and 6,250 ft. in No. 5, same tract. Here, Greensboro Gas Co. is drilling 1 Barton at 3,750 ft. New Penn Development Co., William E. Snee et al are drilling at 3,304 ft. at 1 Kirby and 4,035 ft. at 1 Carothers.

In North Union Township Wasson & Co. et al are building a rig to deepen 1 J. H. Sorg which is a gas well from the Onondaga chert beds and the Oriskany sand. The No. 2 is drilling at 7,422 ft.

On Laurel Ridge in Stewart Township, Fayette County, New Penn Development Co. et al have reached 8,423 ft. in the wildcat on the Gregg L. Neel farm, or about 119 ft. below the top of the Oriskany sand, which so far has been void. In Maryland these operators made about 12 ft. of hole in the test on the Humberson farm on the Accident dome in Garrett County and cemented. Casing has been set at 5,645 ft.

In Armstrong County T. W. Phillips Gas & Oil Co. reached 4,390 ft. in the test on the W. T. Biedenbach farm on the Kellersburg anticline in West Franklin Township and shut down for minor repairs.

In Richhill Township, Greene County, Natural Gas Co. of West Virginia is building the rig for the deep test on the Andrew Workman farm on the west flank of the Washington anticline. In Beaver County St. Joseph Lead Co. is still in trouble at about 5,000 ft. in the test on the J. P. Koehler heirs farm in Center Township.

SUMMARY OF COMPLETIONS

Southwest Pennsylvania

	No.	Bbl.	Footage
Gas wells	7	*1.9	17,428
Dry holes	2	.....	4,742
Total	9	.....	22,170

West Virginia

	No.	Bbl.	Footage
Oil wells	5	52	9,033
Gas wells	15	*1.86	44,425
Dry holes	4	.....	6,560
Total	24	.....	60,018

*Million cu. ft.

Armstrong County

Burrell Township: T. W. Phillips 1 Flora Stivenson, 381,000 cu. ft. gas, Tiona and Bradford sands, T.D. 3,375 ft.

Parks Township: Chestnut Ridge 1 Samuel Orr heirs 103,000 cu. ft. gas, Bradford sand, T.D. 3,523 ft.

South Buffalo Township: Local Co. 1 J. R. Hill, 132,000 cu. ft. gas, Hundred Foot and Thirty Foot sands, T.D. 1,712 ft.

Clarion County

Limestone Township: Owens-Illinois 1 Frank Miller, 86,000 cu. ft. gas, T.D. 834 ft.

Fayette County

Nicholson Township: Blaho & Tedrow 1 Hartley heirs, 539,000 cu. ft. gas, Big Injun 1,274 ft., gas 1,372-77 ft., T.D. 1,451 ft.

Greene County

Perry Township: Equitable Gas 1 M. C. Keener heirs, 660,000 cu. ft. gas, Fifty Foot sand 2,759 ft., gas 2,761 ft., T.D. 2,767 ft.

Washington County

Amwell Township: Chivers et al 2 Lucille Frazee, dry, gas sand, T.D. 1,784 ft.

Westmoreland County

Franklin Township: Peoples 1 Sarah C. Doyle, dry, Bradford sand, T.D. 2,958 ft.

Upper Burrell Township: Peoples 1 James and Margaret Scott, 33,900 cu. ft. gas, Bradford sand, T.D. 3,766 ft.

WEST VIRGINIA

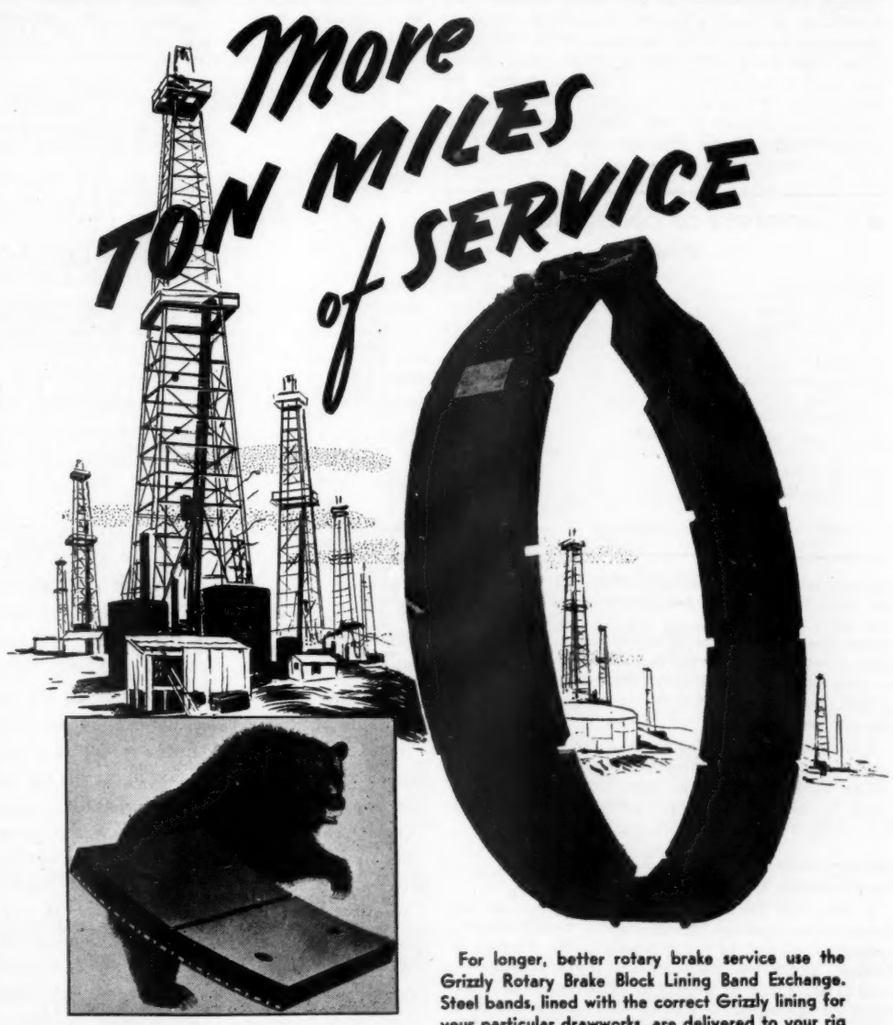
A busy week is in prospect in the Oriskany fields in Kanawha and Jackson counties with 12 wells drilling in the Corniferous lime and due for the Oriskany sand. In Ravenswood district, Jackson County, the test of Joe Rubin et al on the J. G. and A. D. Curry farm topped the Corniferous lime at 4,796 ft., steel-line measurement. It is viewed with interest as it is in an area where another fair well might prove a field.

In Monongalia County the Hope Natural Gas Co. is still fishing for tools at 6,867 ft. in the test on the H. C. Greer et al lease in Morgan district. In Lewis County the rotary test of this company is still held up with a fishing job on the Alfred Woofter farm in Freemans Creek district.

Boone County

Washington district: Westmoreland 2 fee, 119,000 cu. ft. gas after shot, Big lime 2,233-2,430 ft., Big Injun 2,430-2,505 ft., Berea 2,949-81 ft., gas 2,955 ft., T.D. 2,990 ft.

(Continued on Page 85)



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GRIZZLY ROTARY BRAKE BLOCK LINING EXCHANGE

Grassy Butte Wildcat, East of Kevin-Sunburst, Cores Show

By T. R. INGRAM

DENVER, Colo., Aug. 18.—The Wertz field in Carbon County, Wyoming, where the Sinclair-Wyoming Oil Co. has developed prolific production in the Tensleep of Pennsylvanian age, was extended over into Sweetwater County the past week in the completion of that company's 22-A Wertz, SE SE SE 1-26n-90w. It set the 7-in. on top of the Tensleep at 5,856 ft., and completed it at 6,221 ft. for 700 bbl. in 24 hours through 2½-in. tubing. It is a west offset to 16-A Wertz, on the Carbon County side, which was completed last January in the Tensleep for 900 bbl.

The Rock River field in Carbon County was extended one location to the north in the Dakota sand in the Ohio Oil Co. 3 Harrison & Cooper, C SW SE 27-20n-78w, which pumped 50 bbl. daily from the Dakota at 3,608-3,702 ft. after plugging back from 3,717 ft. It is a north offset to 13 State, which also was an extension, which was completed last month for 175 bbl. on the pump. Last named was an east offset to a dry hole.

SUMMARY OF COMPLETIONS

Wyoming

	No.	Bbl.	Footage
Oil wells: Fields	4	1,163	19,964
Dry holes: Fields	3	.....	7,035
Gas wells: Fields	1	*4.6	3,845
Total	8	.....	34,754
Recompletions: Fields	2	123	3,910

*Million cu. ft.

Montana

	No.	Bbl.	Footage
Oil wells: Fields	3	300	6,373
Dry holes: Wildcats	1	.....	4,148
Total	4	.....	10,521

The productive limits of the Shannon sand on the Cole Creek structure were defined on the south side in General Petroleum 37-21-G, NW SE SW 21-35n-77w, which was dry at 4,648-82 ft. It is ¼ mile south of nearest producer.

Stanolind Oil & Gas Co., operator for the Salt Creek unit, completed its deepening program for the year in its 25-SD-3, which was deepened from the Wall Creek to the third Sundance and recompleted for 108 bbl. through a 6/64-in. bean.

Producer Showing 25 Miles East of Kevin, Montana

A discovery in Liberty County, Montana, on the Grassy Butte structure, 25 miles east of Kevin-Sunburst, appears imminent in the Montana-Dakota Utilities 1 Oswood, C NE SW 18-35n-4e. It cored a saturated sand in black lime at 2,869-77 ft. The sand is believed to be the equivalent of the Cut Bank sand in the field of that name. It had the top of the Kootenai at 2,244 ft., 2,000,000 cu. ft. of gas at 1,939-47 ft., and 4,000,000 cu. ft. at 2,164-2,244 ft.

COLORADO DRILLING REPORT

El Paso County: F. F. Hintze 1 State, CEL SE SE 16-11s-60w, resumed at 1,990 ft.
La Plata County: N. Splatter 1-X Bruce, C SW SW 31-33n-9w, S.D. 4,450 ft.
E. B. Klem 1 Olbert, NW SW 9-35n-12w, drilling 4,213 ft.
Logan County: Mutual Oil 1 State, C SW SW 32-7n-51w, Cemented 12½-in. at 150 ft.
Moffat County: Mountain Fuel Supply 9 Wilson, NE SE NE 22-12n-100w, rigging rotary to go to 2,500 ft.
Privett & Spangler 1 Stillings, NE SE SE 12-5n-96w, drilling 1,000 ft.
Mountain Fuel Supply 2 Lasher, NW NE NE 25-12n-101w, ready to spud.
Mountain Fuel Supply 4 Musser, NE NW NW 4-11n-97w, T.D. 2,245 ft., cemented 7-in. at 2,225 ft., showed 7,500,000 cu. ft. on drill-stem test.
Rio Blanco County: Buford Oil 1 Government, C SW SW 16-1n-91w, S.D. 4,527 ft. for casing.
Texas-California 7 Unit, NE SW SE 34-3n-9w, drilling 4,113 ft.
United Oil Prod. 1 Hill, Lot 13, 6-1n-101w, drilling below 150 ft.

WYOMING COMPLETIONS

Cole Creek, Natrona County: General Petroleum 37-21-G, NW SE SW 21-35n-77w, T.D. 4,682 ft., dry and abandoned, top of Shannon sand 4,648 ft.
Dewey field, Weston County: Dr. W. H. Connor 2 State, NE SW 36-42n-62w, dry in Sundance, upper Sundance at 815-23 ft., showed some saturation.
East Hiawatha field, Sweetwater County: Mountain Fuel Supply 2 Newberger, SW NW NW 18-12n-99w, T.D. 3,845 ft., P.B. to 3,286 ft., 4,600,000 cu. ft. in Wasatch sand at 3,220-50 ft. through perf. in 7-in.
La Barge field, Sublette-Lincoln counties: Garetson-Knisely 2 Government, CEL NW SE 28-27n-113w, dry, T.D. 1,453 ft.
Investment Oil 1 Government, NW cor. Lot 2, 3-26n-113w, T.D. 970 ft., recompleted for 15 bbl. after deepening from 875 ft.
Lance Creek field, Niobrara County: Ohio 19 Lamb-Acct. 1, CSL NW NE 5-35n-65w, T.D. 5,460 ft., 7-in. at 5,359 ft., flowed 228 bbl. in 24 hr. through 16/64-in. bean on 2½-in. tubing from third Leo sand.
Mahoney dome, Carbon County: Sinclair-Wyoming 5-C Mahoney, C NW SE 34-26n-88w, T.D. 4,566 ft., P.B. to 4,413 ft., flowed 185 bbl. in 20 hr. from Tensleep at 4,325-4,410 ft.
Salt Creek field, Natrona County: Stanolind 25-SD-3, SE SE SW 26-40-79, T.D. 2,840 ft., top third Sundance 2,831 ft., flowed 108 bbl. through 6/64-in. bean on 2-in. tubing, recompletion, old well deepened from Wall Creek at 1,122 ft.
Rock River field, Carbon County: Ohio 3 Harrison & Cooper, SW SE 27-20n-78w, T.D. 3,717 ft., P.B. to 3,702 ft., pumped 50 bbl. daily from Dakota, 5½-in. at 3,608 ft.
Wertz field, Carbon-Sweetwater counties: Sinclair-Wyoming 22-A Wertz, SE SE SE 1-26n-90w, T.D. 6,221 ft., 7-in. at 5,856 ft., flowed 700 bbl. through 2½-in. tubing.

WYOMING DRILLING REPORT

Carbon County: Sinclair-Wyoming 23-A Wertz, NE NE NE 12-26n-90w, drilling 6,171 ft. in Tensleep.
Glen Swartout 3 Union Pacific, NE NE SE 21-22n-78w, drilling 612 ft.
Sinclair-Wyoming 26 Wertz, NW SE SE 1-26n-90w, cellar.
Sinclair-Wyoming 25 Wertz, NW SE SW 6-26n-89w, rigging rotary.
Sinclair-Wyoming 24 Wertz, NW NW SW 7-26n-89w, cellar.
Sinclair-Wyoming 25-C, SE SE NW 25-26n-87w, building rig.
Fremont County: Indian Oil 3 Tribal, NW SW NW 23-6n-2w, drilling 693 ft.
Valentine M. Kirk 3 Tribal, NW NW SW 23-6n-2w, drilling 1,082 ft.
Bison Basin Oil 1 Kirk, CEL NW SW 17-27-95w, drilling 3,067 ft. in red beds, top 3,027 ft.
Natrona County: General Pet. 33-22-P, NW SE NW 22-35n-77w, location, first report.
General Petroleum 55-22 Government, NW SE 22-35n-77w, moving in rotary.
Casper Creek Oil 1 State, SW SW NW 36-36n-81w, T.D. 2,612 ft., preparing to run 6¾-in.
Iba Development 1, C NE SE 25-32n-82w, drilling 1,540 ft., carrying 5½-in.
Niobrara County: Ohio 10 A. Rohlff, SW NE 32-36n-65w, T.D. 5,370 ft., cemented 7-in. at 5,356 ft.
Argo 17-B Elliott, SW NE NE 6-35n-65w, T.D. 5,462 ft., P.B. to 5,396 ft., perf. 7-in. at 5,144-5,242 ft., flowed 2 bbl. per hr., acid. 500 gal., flowed 5 bbl. per hr., will acid again.
Western Petroleum 1 Mosier, SW SW 31-35n-64w, S.D. 1,003 ft., repairs.
Continental 9-A Schuricht, NW NW SW 5-35n-65w, drilling 1,990 ft., shale, 10¾-in. at 307 ft.
Continental 14 O. Rohlff, NW NW SW 32-36n-65w, drilling 3,422 ft. in shale.
Lewis Gokel 2, CEL SW SE 2-34n-63w, spudded.
Park County: Stanolind 21-X Rosenberg, NE SW NW 25-58n-98w, T.D. 3,037 ft., testing.
Enalpac O. & G. 1 Purple-O.P.C., SE SE 31-51n-100w, T.D. 3,840 ft., 5½-in. at 3,794 ft., acid. 500 gal., flowed 75 bbl. first 4 hr. while cleaning out.
Standard 11-X Rosenberg, SE NE NE 26-58n-98w, drilling 2,470 ft.
MacKinney Oil & Drilling 1 Northern Pacific, CNL NW NW 5-57n-99w, S.D. 1,904 ft. to run 7-in.
Enalpac Oil & Gas 3 Sarah, C SW SE 32-51n-100w, rigging rotary.
Sublette County: Texas 1-A Government, NW NW NW 34-27n-113w, cemented 8⅝-in. at 976 ft.
North La Barge Oil 9 Government, CSL NE NE 28-27n-113w, T.D. 1,286 ft., P.B. to 1,135 ft., testing.
Marvel Oil 2 Government, C NE SE 28-27n-113w, rigging cable tools (cor.).
Sweetwater County: Rocky Mountain Drilling 1 State, SW SW SW 36-20n-104w, S.D. 6,447 ft.
West States Pet. 1 Unit, C SE SE 10-12n-101w, T.D. 3,900 ft., cementing 7-in. at 2,686 ft.
Gus Pongratz 1 Clark, C NW NE 22-14n-104w, drilling 6,300 ft. in phosphoria beds.
Sinclair-Wyoming 101-A, NW NW NW 11-26n-90w, drilling 4,241 ft.
Farson Oil & Gas 1 Government, C SE NE 18-25n-108w, resumed at 1,385 ft.
Sinclair-Wyoming 102 Lost Soldier, SE SE SE 3-26n-90w, derrick.
Vermilion Oil 1 Government, SW NE NE 6-12n-99w, drilling 1,512 ft.
Weston County: John Brorphy 1 Hansen, NW NE NW 13-44n-63w, T.D. 2,820 ft., fishing.
Pierre LaFleishe 1 Dober, NW NW NE 21-45n-63w, coring in Muddy sand, top 3,570 ft.
Carl Kundy 3, NE NE NW 32-46n-63w, location.
George Keisling 2 Guyer, SW SW SE 26-46n-64w, sand at 1,916-53 ft., will make average well.
Bert Higgins 8 fee, NE NW SW 4-46n-63w, drilling below 100 ft.
Wyoming Oil & Gas 18, CEL SE SW 19-46n-63w, drilling 500 ft.

MONTANA COMPLETIONS

Cut Bank field, Glacier County: Glacier Production 7 Bonnet, CSL SE NW 4-32n-5w, T.D. 2,929 ft., 7-in. at 2,862 ft., Sunburst at 2,815-35 ft., slight show oil, top Cut Bank sand 2,850 ft., 2,000 ft. oil, not tested, est. 200 bbl.
Kevin-Sunburst field, Toole County: Enfield Oil 4 Zacher, SE NW NW 20-35n-1w, T.D. 1,600 ft., contact 1,583-1,600 ft., 200 ft. oil in hole, acid. 500 gal., pumping 90 bbl. a day.
Nepstad Oil 2 Hugi, NE SE NW 11-35n-3w, T.D. 1,844 ft., contact 1,802-08 ft., pumping 10 bbl. a day after acid. three times.
Signal Butte wildcat, Hill County: A. B. Cobb et al Government, SE SE NE 19-37n-15e, T.D. 4,148 ft., plugged and abandoned in top of Madison.

MONTANA DRILLING REPORT

Carbon County: Continental 1 Merrill, SW SW SW 34-9s-25e, drilling 928 ft. in shale, cemented 13¾-in. at 170 ft.
Fallon County: Carter 1 Northern Pacific unit, C SE SW 19-4n-62e, drilling 7,809 ft., dolomite and lime.
Glacier County: Par Oil 1 Tribal-200, NE NE SE 13-32n-6w, T.D. 705 ft., fishing.
Texas 7 Curren, C SE NW 8-32n-5w, location.
Texas 2 Lander, C NE SE 20-35n-6w, redrilling 180 ft.
Texas 2-B Government, SE SE SE 18-32n-5w, cemented 10¾-in. at 410 ft., top Colorado 345 ft.
Texas 3 Lindquist, C NE NE 20-32n-5w, drilling 1,000 ft., top Colorado 430 ft., 10¾-in. 463 ft.
McDonald, Henderson, Overcash 2 Tribal-190, SW NW NW 29-32n-5w, spudded.
Texas 3 Willis, SE NW NE 19-32n-5w, drilling 940 ft., top Colorado 372 ft., 10¾-in. 436 ft.
Hannah-Porter 3 Tribal-189, SW SE SE 19-32n-5w, T.D. 2,906 ft., shot 140 qt. 2,835-67 ft., 1,500 ft. oil in hole.
Hanlon 1 Tribal-196, NE NE NE 30-32n-5w, spudded.
M. R. Wagner, tr., 2 Tribal-184, SE NE NE 13-32n-6w, rigging up.
Santa Rita 2 Jacobson, NW SE NW 23-27n-5w, cemented 7-in. 2,570 ft., Sunburst 3,580-88 ft., show of oil, 800 ft. oil in hole from Cut Bank (?) 2,603-05 ft., swabbed 77 bbl. in 15 hr.
Consolidated Gas 1 Frary-Tribal-208, NE cor. Lot 3 (NE SE) 24-32n-6w, location, first report.
R. C. Jeffries 1 Tribal-197, NE SE NW 30-32-5w, location, first report.
Castle-Oardee 1 Tribal-197, SE NE NW 30-32n-5w, location, first report.
Liberty County: Montana-Dakota Utilities 1 Oswood, C NE SW 18-35n-4e, T.D. 2,879 ft., saturated sand in black lime at 2,869-77 ft.
Toole County: Lund & Engleking 1 State, NE NE NE 34-35n-4w, T.D. 2,066 ft., break at 2,058-60 ft., acidized 500 gal., no results, will acidize again.

(Continued on Page 91)

California Fields

(Continued from Page 77)

Jergins Oil Co. 2 Howard, 7-2s-14w, building rig.
Standard 2-12 Vickers, 7-2s-14w, rigging up.
Standard 2-13 Vickers, 7-2s-14w, rig.
Texas 8 Smith, 7-2s-14w, drilling 6,782 ft. in sand, elev. 242 ft.
Associated 70 Vickers, 7-2s-14w, drilling 5,864 ft. in sand and shale, elev. 229 ft.
Traders Oil Co. 1 Bush, 8-2s-14w, location graded.
Potrero, Los Angeles County: Associated 5 Cypress, 34-2s-14w, building rig.
Rosecrans, Los Angeles County: R. S. Lytle 2 Anderson, 1-3s-14w, drilling 2,194 ft. in sand, elev. 233 ft.
Rankin & Williams 1 Athens, 7-3s-13w, drilling 9,490 ft. in gray sand and shale containing occasional streaks of oil sand, may land casing.

LOS ANGELES BASIN WILDCATS

Chino district, San Bernardino County: Prado Pet. Corp. 1 Lamp, 31-2s-7w, drilling 1,682 ft. in sand, elev. 560 ft.
La Mirada district, Orange County: Texas Co. 1-A McNally, 22-3s-10w, building rig and hauling in equipment, elev. 112 ft.
Manhattan Beach district, Los Angeles County: Dominguez Ext. Oil Co. 1 Sunset, 19-3s-14w, redrilled 5,926 ft., streaks of oil sand, elev. 135 ft.
Mines district, Los Angeles County: Six Companies 1 Poso Seco, 2-3s-15w, location graded, joint test by Standard, Union, Texas, Associated, Richfield, and Shell which bought acreage in fee a few years ago.
Palos Verdes district, Los Angeles County: Newton Dev. Co. 1 P.V., 13-5s-15w, drilling 2,131 ft. in hard sand and shale with cable tools, fishing reamer, some basalt found.
Puente district, Orange County: Sunset Oil Co. 1 Baldwin, 11-2s-11w, drilling 1,955 ft. in sand.
Rio Hondo district, Los Angeles County: Rosemeade Oil Co. 1 Smith, 32-1s-11w, building rig and hauling in equipment, located 1 mi. north of eastern tip of Montebello field.
White's Point district, Los Angeles County: Surety Holding Co. 1 Sepulveda, 22-5s-14w, drilling in sand and shale 372 ft., elev. 156 ft.
Whittier district, Los Angeles County: Continental Oil Co. 1 Turnbull, 13-2s-11w, drilling 2,694 ft. in sand and shale, elev. 535 ft.
Wilmington district, Los Angeles County: J. F. Wilcox 1 North, 20-4s-13w, drilling 3,457 ft. in oil sand and shale, elev. 46 ft.

Operations Reach New High; Two Pools Are Opened

By STAFF CORRESPONDENT

MATTOON, Ill., Aug. 18.—Illinois operations continued their steady increase during the past week, reaching a new peak of 528 by the end of the week. Hamilton County, where activity has been spurred by a recent discovery, led all other areas in new work with 24 first reports for the week. Wayne County, also influenced by recent sensational discoveries, followed with 15 first reports and White County, which for many months has been the leader in activity, also reported 15 new tests.

Richland County Gains Two New Fields

Developments in Richland County last week indicated that the county may soon have the greatest boom in the history of its oil development. C. R. Craft et al 1 Daubs, W½ SW NE 8-2n-14w, wildcat 1 mile southwest of the Bonpas field, came in last week with production estimated at 35 bbl. an hour, natural, from McClosky pay at 3,141-68 ft. and is now making 700 bbl. daily regularly. In addition to the McClosky pay, 1 Daubs is also reported to have encountered 22 ft. of good Benoist sand pay and although it has not been tested, it is likely attempts will be made soon to obtain production from that formation. Craft et al, meanwhile, have started 1 Whitaker, south offset to the discovery.

Outstanding of Richland County's two discoveries last week, however, was Ohio-Barnsdall 1 Koertge, W½ SW SW NW 29-2n-14w, wildcat 3 miles south of the Daubs discovery. No. 1 Koertge lived up to predictions that it would make a large producer when it flowed 416 bbl. in 6½ hours natural from McClosky pay at 3,115-25 ft. The test cored excellent McClosky pay from 3,117-29 ft. and stopped before going completely through the pay. With storage capacity of 1,000 bbl. already on the location, Ohio began building additional tanks and also is running a pipe line from Bridgeport, indicating that one of the largest wells in that part of the state is expected. Whether the 1 Daubs and 1 Koertge indicate a new, large field, or will open two separate fields cannot be determined until the area is further developed.

Gallatin County May Have New Tar Springs Pool

A new Tar Springs sand pool was indicated for Gallatin County last week when Angle & Angle 1 J. Daley, SE NW SW 25-8s-9e, set 7-in. casing at 2,135 ft. Tar Springs pay was topped at 2,136 ft. and hole was bottomed at 2,148 ft. No. 1 J. Daley is about 6 miles north of Shawneetown and about 2 miles southwest of nearest production in a small field recently opened by Donald Colbeck on the Egyptian Tie & Timber Co. lease.

Woodlawn Outpost Makes Excellent Producer

Activity in the new South Woodlawn field continued to increase by large spurts last week as total operations in the field reached the 40 mark, making the field one of the most active in the Illinois basin.

Of interest last week was a northeast outpost, Shell 1 Burkhardt, SW SW NE 35-2s-1e, which swabbed 34 bbl. of oil and no water, natural, in 4 hours from the Benoist sand at a total depth of 1,988 ft. Also of interest during the week was a south outpost, W. C. McBride 1 Eubanks, NE NW NE 2-3s-1e, which swabbed 874 bbl. in 24 hours, following a shot of nitro, to become the first producer in Blissville Township.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Benton	7	1,617	15,032
Dale	4	1,537	12,151
Johnsonville	3	4,357	9,234
Louden	8	940	17,096
Mount Carmel	5	765	10,713
North Boos	4	2,362	11,214
North New Harmony	5	921	13,920
Rising Sun	5	850	11,851
South Woodlawn	3	1,403	5,963
Other pools	18	4,321	41,601
Wildcats	1	75	2,897
Dry holes: Fields*	11	.....	27,136
Wildcats	8	.....	14,683
Total	82	.....	193,491
Recompletions	2	144	.....

*Casey 1, St. James 1, Louden 1, Hoodville 2, Noble 1, Allendale 2, Calvin 1, Roland 1, Maunie 1.

WILDCAT COMPLETIONS

Bureau County: J. H. Wall 1 Baird, NW NW NW 9-18n-10e, dry at 2,309 ft.

Clinton County: Hughes 2 Holman, NE SW SE 10-2n-1w, dry at 1,460 ft., Glen Dean 1,135 ft., Benoist 1,450 ft.

Effingham County: Carter 1 J. N. Tennery, NW NE SW 31-9n-4e, dry at 1,694 ft., Cypress sand 1,569 ft., Benoist 1,663 ft.

Jefferson County: McBride 1 Hoffa, SW NE NE 2-3s-1e, location abandoned.

Lawrence County: Anderson 1 Stockman heirs, NW SW SW 7-2n-12w, dry at 2,442 ft., Glen Dean 1,802 ft., Hardinsburg 1,816 ft., Golconda 1,922 ft., Barlow 1,996 ft., Cypress 2,008 ft., Benoist 2,130 ft., Ste. Genevieve 2,302 ft., St. Louis 2,432 ft.

Montgomery County: R. J. McFarland 1 Cunningham, SE NE NE 29-11n-5w, dry at 1,155 ft.

Washington County: Reward Oil 1 J. Molting, SE SW SW 34-1n-1w, dry at 1,557 ft., Glen Dean 1,149 ft., Hardinsburg 1,172 ft., Golconda 1,219 ft. Benoist 1,300 ft., Cypress 1,321 ft., Cypress sand 1,341 ft., Paint Creek 1,438 ft., Benoist 1,486 ft., Benoist sand 1,494 ft., Renault 1,536 ft., Aux Vases sand 1,549 ft.

Wayne County: Robinson & Continental 1 Puckett, E½ SE SE 17-2s-8e, dry at 3,410 ft., Menard 2,435 ft., Waltersburg 2,508 ft., Glen Dean 2,678 ft., Golconda 2,808 ft., Barlow 2,909 ft., Cypress 2,918 ft., Cypress sand 2,927 ft., Paint Creek 3,073 ft., Benoist 3,185 ft., Aux Vases 3,214 ft., Aux Vases sand 3,218 ft., Ste. Genevieve 3,273 ft., Fredonia 3,327 ft.

White County: Wall & Mitchell 1 Kershaw, SW SW NE 22-3s-10e, pumped 75 bbl., 40-qt. shot 2,879-97 ft., Cypress sand 2,870-97 ft., T.D. 2,897 ft., *POOL OPENER.*

Whiteside County: J. S. Feltus 1 Hopkins, NW NE NE 35-21n-6e, dry at 656 ft.

FIELD COMPLETIONS

Clark County

Casey: Verlin Pinnell 2 Len Taylor, SE SE SE NW 23-12n-14w, dry at 1,521 ft., sand 350 ft., Devonian 1,497 ft.

Siggins: Henry Lane 7 Ella Lane, NW NE NW 18-10n-14w, pumped 1½ bbl., 20 sticks dynamite 520-50 ft., sand 520-50 ft., T.D. 550 ft.

Clay County

Sailor Springs, C. Robinson 6 Tolliver, NW NE SW 26-4n-7e, location abandoned.

Edwards County

Albion: Superior 5 C. L. Kiley, SE NW NW SE 7-2s-11e, flowed 1,000 bbl., 5,000 gal. acid, perf. 3,060-72 ft., McClosky 3,060-72 ft., 3,132-52 ft., T.D. 3,155 ft.

Effingham County

Mason: K. Benson 1 Comm., NW NW NE 22-6n-5e, pumped 225 bbl., 1,000 gal. acid, McClosky 2,490 ft., T.D. 2,506½ ft.

Jones et al 1 Benson, NE SW NW 27-6n-5e, pumped 240 bbl., natural, Benoist 2,309 ft., T.D. 2,321 ft.

Fayette County

St. James: Texas 5 Maxwell, NE SE SW 19-6n-3e, dry at 1,615 ft., Glen Dean 1,445 ft., Golconda 1,505 ft., Cypress 1,590 ft., Weller 1,606 ft.

Louden: Carter 4 Buzzard, SW SE SE 34-9n-3e, pumped 144 bbl. oil and 24 bbl. water, 15-qt. shot 1,516-21 ft., Cypress sand 1,516 ft., T.D. 1,534 ft.

Carter 1 Buzzard, SW NW SW 35-9n-3e, pumped 48 bbl. oil and 40 bbl. water, 20-qt. shot 1,520-26 ft., Cypress sand 1,519 ft., T.D. 1,532 ft.

Carter 2 Willis-Gordon, SW NW NW 36-9n-3e, pumped 45 bbl. oil and 50 bbl. water, 20-qt. shot shot 1,534-42 ft., Cypress sand 1,529 ft., T.D. 1,554 ft., P.B. 1,500 ft.

Carter 3 Willis-Gordon, SE SW NW 36-9n-3e, pumped 20 bbl. oil and 39 bbl. water, Cypress sand 1,544 ft., T.D. 1,557 ft.

Whisenant & Trenchard 27-D Lilly, W½ SW SE 16-8n-3e, flowed 200 bbl. oil and 20 bbl. water through 11/64-in. choke, perf. 3,133-40 ft., Devonian 3,051 ft., pay 3,094-3,102 ft., T.D. 3,164 ft.

Carter 2 Durbin-Hooper, SE SW SE 23-8n-3e, dry at 1,639 ft., Glen Dean 1,355 ft., Cypress 1,491 ft., Cypress sand 1,548 ft., Paint Creek 1,606 ft.

Carter 6-D Raymond Comm., N½ SW SE NE 29-8n-3e, flowed 200 bbl., perf. 3,021-27 ft., Devonian 2,939 ft., pay 3,025 ft., T.D. 3,042 ft.

Carter 13-D Wright, E½ SW NE 21-8n-3e, flowed 200 bbl., Devonian 3,063 ft., T.D. 3,166 ft.

Carter 3 R. Doty, SE NE NE 12-8n-3e, pumped 72 bbl., 15-qt. shot 1,538-43 ft., Weller 1,538 ft., T.D. 1,547 ft.

Franklin County

Benton: Mosebach 2 Lager, S½ NW NE NE 35-6s-2e, pumped 582 bbl., 60-qt. shot 2,128-51 ft., Tar Springs 2,121 ft., T.D. 2,152 ft.

Adkins 3 Lager, SW NE NE 35-6s-2e, pumped 432 bbl., 50-qt. shot 2,132-57 ft., Tar Springs 2,115 ft., T.D. 2,161 ft.

Manley 3 Lager, SE NE SE 26-6s-2e, pumped 158 bbl., 30-qt. shot 2,136-46 ft., Tar Springs 2,125 ft., T.D. 2,147 ft.

Adkins 3 McKemie, SE NE NE 25-6s-2e, pumped 147 bbl., 40-qt. shot 2,150-66 ft., Tar Springs 2,138 ft., T.D. 2,166 ft.

Edkins 1 Chenault, NE NE SE 25-6s-2e, pumped 160 bbl., 60-qt shot 2,129-44 ft., Tar Springs 2,122 ft., T.D. 2,145 ft.

Shell 4 McKemie, NE SE SE 24-6s-2e, pumped 128 bbl., 15-qt. shot 2,153-63 ft., Tar Springs sand 2,134 ft., T.D. 2,163 ft.

McBride 3 Chapman, NW NW SE 23-6s-2e, pumped 10 bbl., 10-qt. shot 2,090-98 ft., Tar Springs 2,087 ft., T.D. 2,098 ft.

Hamilton County

Hoodville: Pollock et al 1 Harrington, SW NE SE 11-6s-6e, dry at 3,250 ft., Glen Dean 2,443 ft., Golconda 2,590 ft., Cypress 2,743 ft., Benoist 2,958 ft., Aux Vases 3,045 ft., Ste. Genevieve 3,075 ft.

Texas 2 B. Lager, NE NW SW 11-6s-6e, dry at 3,324 ft., Tar Springs 2,415 ft., Glen Dean 2,485 ft., Cypress sand 2,794 ft., Benoist 2,985 ft., Aux Vases 3,087 ft.

Dale: Shell 3 A. Ritcheson, NE SW NE 7-6s-7e, flowed 556 bbl., 15-qt. shot 2,971-86 ft., Aux Vases 2,955-86 ft., T.D. 2,990 ft.

Pure 2 Kemle-Mayberry, SE SW SE 7-6s-7e, pumped 13 bbl. oil and 1 bbl. water, 160-qt. shot 3,027-45 ft., Aux Vases 3,006-35 ft., T.D. 3,045 ft.

Ohio 5 Wilson, NW SW NE 6-6s-7e, flowed 482 bbl., natural, Aux Vases 2,980 ft., T.D. 3,014 ft.

Kingwood 5 Dodd, SW SE NW 6-6s-7e, flowed 486 bbl., 70-qt. shot 2,976-3,000 ft., Aux Vases 2,961-79 ft., T.D. 3,102 ft.

Jasper County

North Boos: Texas 2 A. Gregoise, NW NE NE 8-6n-10e, flowed 960 bbl., 5,000 gal. acid, McClosky 2,792-2,801 ft., T.D. 2,804 ft.

Pure 1 E. May "A," SE NW NE 8-6n-10e, flowed 738 bbl., 5,000 gal. acid, McClosky 2,773-75 ft., 2,778-85 ft., 2,790-2,800 ft., T.D. 2,800 ft.

Pure 1 L. J. Long "B," NE NE NE 8-6n-10e, pumped 185 bbl., 5,000 gal. acid, McClosky 2,750-53 ft., 2,768-79 ft., T.D. 2,800 ft.

Pure 2 Eckl Consol., NW SE NE 8-6n-10e, flowed 479 bbl., 5,000 gal. acid, McClosky 2,778-84 ft., T.D. 2,810 ft.

Boos: Pure 2 Bolander, W½ SE NE 4-5n-10e, pumped 9 bbl., 5,000 gal. acid, McClosky 2,806-10 ft., T.D. 2,835 ft.

West Liberty: Pure 1 J. Benefield, N½ SE NE 8-5n-10e, flowed 482 bbl., 1,000 gal. acid, McClosky 2,798-2,802 ft., 2,807-10 ft., T.D. 2,825 ft.

Jefferson County

South Woodlawn: Texas 1 Eubanks, SW NW SE 35-2s-1e, pumped 691 bbl., 20-qt. shot 1,970-80 ft., Benoist 1,955 ft., T.D. 1,982 ft.

Eddie Self 1 Zinke, N½ NE NW SW 35-2s-1e, pumped 365 bbl., 20-qt. shot 1,979-87 ft., Benoist 1,978 ft., T.D. 1,991 ft.

Kingwood 2 First Natl. Bank of Woodlawn, NE NE SW 35-2s-1e, pumped 347 bbl., 25-qt. shot 1,976-87 ft., Benoist 1,973 ft., T.D. 1,990 ft.

Lawrence County

Allendale: Leighty 1 Spidel, NW SW NE 26-2n-12w, pumped 30 bbl. oil and 5 bbl. water, 60-qt. shot 1,385-1,405 ft., Biehl 1,372 ft., pay 1,385-1,405 ft., T.D. 1,405 ft.

Marion County

Tonti: Harvey 7-B Kagy, SW SE SE 33-3n-2e, dry, old well deepened from 3,565-3,742 ft., junked hole.

Salem: Texas 24 N. Young, SW SE NE 20-2n-2e, pumped 144 bbl., Trenton 4,521 ft., pay 4,548-4,622 ft., old well deepened to 4,635 ft.

Richland County

Noble: Pure 1 A. Nae "B," E½ NW SE 6-3n-9e, dry at 3,075 ft., Glen Dean 2,463 ft., Ste. Genevieve 2,972 ft., Aux Vases 2,952 ft., Rosiclare 2,993 ft., Fredonia 3,027 ft.

St. Clair County

Dupo: R. R. Loveridy 1 Gaskill, SW NW NW 34-1n-10w, pumped 250 bbl. oil and 450 bbl. water, Trenton 645 ft., T.D. 700 ft.

Wabash County

Allendale: White & Wickwire, SE SW NW 14-1n-12w, dry at 1,773 ft., Glen Dean 1,717 ft., Hardinsburg 1,796 ft.

Joe Young 1-A Price, E½ NW NE SW 14-1n-12w, dry at 1,638 ft.

White & Wickwire 3 Price, W½ SE SE NW 14-1n-12w, pumped 24 bbl., Tar Springs 1,625 ft., T.D. 1,636 ft.

Joe Young 1-A D. H. Price, NW NW NW 1-1n-12w, pumped 20 bbl., Benoist 1,978 ft., T.D. 1,990 ft.

South Griffin: Longhorn 15 Helm, E½ SW SW NW 23-3s-14w, pumped 200 bbl., Tar Springs 2,169-81 ft., T.D. 2,181 ft.

Mount Carmel: Kennedy 1 Karch, S½ S½ SW 16-1s-12w, pumped 150 bbl., 13-qt. shot 1,985-98 ft., Cypress sand 1,979-88 ft., T.D. 2,000 ft.

Kennedy 2 Carson, N½ SE SE SW 16-1s-12w, pumped 150 bbl., 40-qt. shot 1,975-88 ft., Cypress sand 1,972-88 ft., T.D. 1,988 ft.

Lavender & Hays 1 Mundy, NW NW SE SW 21-1s-12w, pumped 175 bbl., 40-qt. shot on bottom, Cypress sand 1,975-89 ft., T.D. 2,000 ft., P.B. 1,989 ft.

Hays Drlg. 1 Cotner, SE NW NW 21-1s-12w, pumped 165 bbl., 10 per cent salt water, McClosky 2,314-19 ft., 2,319-28 ft., T.D. 2,335 ft.

Aspin 1 Poole, S½ NW NW SW 21-1s-12w, pumped 125 bbl. oil and 10 bbl. water, perf. 2,379-85 ft., 1,000 gal. acid, 40-qt. shot 2,044-65 ft., McClosky

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2,355-59 ft., 2,379-85 ft., Cypress sand 2,048-66 ft., T.D. 2,390 ft., P.B. 2,070 ft.

Wayne County

Enterprise: Sanders 2 Hosselton, E½ SW SW 29-2n-8e, pumped 100 bbl. oil and 20 bbl. water, 5,000 gal. acid, McClosky 3,032-51 ft., T.D. 3,051 ft.

West Enterprise: Pure 1 Harrington-C, E½ NW SW 12-1n-7e, pumped 59 bbl. oil and 12 bbl. water, McClosky 3,064-66 ft., 3,072-82 ft., T.D. 3,095 ft.

Pure 7 Carson Consol., E½ NE NE 11-1n-7e, pumped 303 bbl., 5,000 gal. acid, McClosky 3,033-38 ft., T.D. 3,060 ft.

Johnsonville: Wiser Oil 1 Matchett, S½ SE SE 27-1n-6e, flowed 1,700 bbl., natural, McClosky 3,664-68 ft., T.D. 3,096 ft.

United Prod. 2 Matchett, N½ SW SE 27-1n-6e, flowed 672 bbl., perf. 3,025-27 ft., 3,031-33 ft., 1,500 gal. acid, perf. 3,051-58 ft., 3,045-49 ft., 5,000 gal. acid, McClosky 3,025-27 ft., 3,045-49 ft., 3,052-58 ft., T.D. 3,093 ft.

Shell 1 Turner Comm., S½ SW SW 27-1n-6e, flowed 1,985 ft., 5,000 gal. acid, McClosky 3,014-15 ft., 3,019-28 ft., 3,033-38 ft., T.D. 3,045 ft.

Boyleston: Watkins & Weinert 1 Kincaid, W½ SE SW 36-1s-7e, flowed 703 bbl., 3,000 gal. acid, perf. 3,298-3,304 ft., 3,322-28 ft., McClosky 3,286-90 ft., 3,298-3,304 ft., 3,322-28 ft., T.D. 3,338 ft.

White County

Calvin: Jones 1 Sanders, NE NW SE 12-4s-10e, dry at 3,235 ft., base Pennsylvanian 1,961 ft., Kincaid 2,058 ft., Clore 2,113 ft., Menard 2,304 ft., Glen Dean 2,527 ft., Golconda 2,642 ft., Barlow 2,769 ft., Cypress sand 2,800 ft., Paint Creek 2,896 ft., Benoist 2,933 ft., Renault 2,992 ft., Aux Vases 3,028 ft., Aux Vases sand 3,056 ft., Ste. Genevieve 3,085 ft.

East Calvin: Mabee Drlg. 4 Smith, SW SE SW 4-4s-14w, pumped 54 bbl., 50-qt. shot 2,680-2,700 ft., Benoist 2,690-2,700 ft., T.D. 2,854 ft., P.B. 2,710 ft.

Rising Sun: Skelly 3 F. Karch, SE NE NW 24-6s-10e, pumped 217 bbl., Palestine sand 1,998-2,018½ ft., T.D. 2,018½ ft.

First Nat. Pet. Trust 2 Karch-A, SW SW NE 24-6s-10e, pumped 310 bbl., Palestine 2,011-26 ft., T.D. 2,036 ft.

First Nat. Pet. Trust 1 Karch, NW SW NE 24-6s-10e, pumped 40 bbl. oil and 150 bbl. water, perf. 2,584-89 ft., 2,604-14 ft., 1,000 gal. acid, Cypress sand 2,563 ft., T.D. 2,887 ft.

Cherry & Kidd 1 Karch, SE SE SE NW 24-6s-10e, pumped 150 bbl., Palestine 2,009 ft., T.D. 2,009 ft.

Fields 1 Karch, SW SE SE 13-6s-10e, pumped 133 bbl. oil and 40 bbl. water, 40-qt. shot 2,866-76 ft., Aux Vases 2,860 ft., T.D. 2,880 ft.

Roland: Arrow Drlg. & Lambert 1 Welch, NE SW SW 11-7s-8e, dry at 3,017 ft., Palestine 2,008 ft., Menard 2,050 ft., Waltersburg 2,136 ft., Glen Dean 2,355 ft., base Golconda 2,582 ft., Cypress sand 2,590 ft., Benoist 2,766 ft., Renault 2,805 ft., Aux Vases 2,866 ft., Ste. Genevieve 2,915 ft.

Fisher & Arrow 6 Ellis, SE SE SW 11-7s-8e, flowed 500 bbl., 40-qt. shot 2,154-64 ft., Waltersburg 2,146 ft., T.D. 2,168 ft.

Cronin-Anderson 1 Mitchell, NE SW NW 11-7s-8e, pumped 120 bbl., 40-qt. shot 2,914-30 ft., 140-qt. shot 2,914-30 ft., 160-qt. shot 2,914-30 ft., Aux Vases sand 2,904 ft., T.D. 2,930 ft.

North New Harmony: Tide Water 27 Dennis, NE NW SE NE 33-4s-14w, pumped 175 bbl., 60-qt. shot 2,707-35 ft., Benoist 2,692 ft., T.D. 2,735 ft.

Sun 33 Greathouse, NW NE SW 33-4s-14w, pumped 303 bbl., 60-qt. shot 2,578-93 ft., T.D. 2,598 ft.

Superior 16 Fitten, SE NE NW 28-4s-14w, pumped 200 bbl., 160-qt. shot 2,825-59 ft., perf. 2,688-2,704 ft., 2,587-2,604 ft., Cypress sand 2,588-2,634 ft., Benoist 2,690-2,703 ft., Aux Vases 2,827-54 ft., T.D. 2,860 ft.

Sun & Ellis 17 Jacobs-A, NW SE NW 28-4s-14w, pumped 110 bbl., 80-qt. shot 2,828-60 ft., Aux Vases 2,786 ft., T.D. 2,847 ft.

Superior 19 Fitten, NW NE NW 23-4s-14w, pumped 133 bbl., 7 per cent salt water, 120-qt. shot 2,854-80 ft., perf. 2,208-35 ft., 2,190-2,200 ft., Aux Vases 2,853-62 ft., Tar Springs 2,190 ft., T.D. 2,880 ft.

Maunie: Sinclair 1 Barnes, NW NE SW 7-6s-11e, dry at 3,049 ft., base Pennsylvanian 752 ft., Degonia 1,891 ft., Clore 1,922 ft., Palestine 2,011 ft., Menard 2,082 ft., Waltersburg 2,159 ft., Tar Springs 2,214 ft., Glen Dean 2,328 ft., Hardinsburg 2,393 ft., Golconda 2,437 ft., Barlow 2,576 ft., Cypress 2,597 ft., Paint Creek 2,697 ft., Aux Vases 2,866 ft., Ste. Genevieve 2,887 ft., McClosky 2,895 ft.

ILLINOIS DRILLING REPORT

Bond County: Fox & McConrey 1 Buerkle, SW SW NW 11-4n-2w, Glen Dean 955 ft., Cypress 1,098 ft., Cypress sand 1,130 ft., Benoist 1,256 ft., drilling 1,357 ft.

Republic 1 Mitchell, SW SE SE 28-6n-3w, machine on ground.

Champaign County: C. Robinson 1 Springer, NW NW SW 18-22n-8e, hole caved at 210 ft., cleaning out.

Clark County: Grant Gallatin 1 H. H. Gallatin, N½ NE NW SE 19-10n-13w, set 8-in. 127 ft., drilling 315 ft.

Clay County: Scott 1 Rodgers, NE NW NW 36-4n-7e. T.D. 600 ft., 10-in. 64 ft., waiting on cement.

Sanders 1 Hager, SE SW SE 27-4n-7e, first report, drilling 1,820 ft.

McBride 1 Drake, SE SW NE 34-4n-7e. T.D. 2,610 ft., 7-in. 2,575 ft., waiting on cement.

Rockhill 1 Duff, NW SW SW 20-3n-8e, Palestine 2,142 ft., Vienna 2,414 ft., Tar Springs 2,432 ft., Glen Dean 2,500 ft., Hardinsburg 2,517 ft., Barlow 2,658 ft., Cypress 2,676 ft., 1-hr. drill-stem test 2,686-2,698½ ft., recovered 420 ft. oil and 30 ft. oily mud, drilling 2,730 ft.

Delta Prod. 1 Crackel, S½ SW SE 23-4n-8e, Menard 2,248 ft., Vienna 2,392 ft., Tar Springs 2,402 ft., Glen Dean 2,496-2,518 ft., Ste. Genevieve 3,002 ft., drilling 3,020 ft.

Clinton County: Thompson et al 1 Deters, NE SW NE 11-2n-3w. S.D. 1,020 ft.

Texas 1 P. Gray, S½ NW SE 35-2n-2w, first report, moving in rotary tools.

J. W. Malcolm et al (was Walters) 1 Monken, NW NE NE 3-1n-2w, spud.

Coles County: A. M. Meyers 1 Ashmore, E½ SE NW SW 28-13n-14w, sand 452 ft., 6-in. 452 ft., S.D. 455 ft.

W. Thomas 2 S. P. Taylor, E½ E½ SW NE 33-14n-10e, T.D. 124 ft., running 6-in.

Fayette County: Longarden (was Spires) 1 Braasch, NE NW SW 1-5n-2e, Benoist 1,800 ft., S.D. 1,810 ft.

J. T. Elmore 1 Keith, SE NE NW 18-6n-1w, S.D. 1,662 ft.

Gallatin County: P. A. Murrelle 1 E. Fitzgibbons, SW

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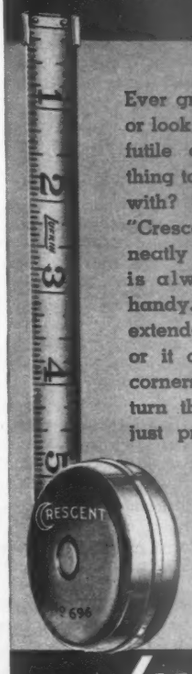

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SW SW 24-10s-9e, first report, 6-in. 55 ft., drilling 202 ft.

Hamilton County: Kingwood et al 1 Johnson, NE SE NE 14-6s-5e, T.D. 3,198 ft., 70-qt. shot 3,174-89 ft., flowed 938 bbl., testing.

Jasper County: Pure 1 Wagner Consol., W½ NW NW 11-6n-10e, set 8-in. 251 ft., drilling 1,284 ft.

Jefferson County: Nation 1 C. A. Piper, NE NW NW 1-3s-1e, S.D. 860 ft.

La Salle County: A. Hannah 1 Lloyd Sage, NE SE NW 8-32n-2e, drilling 233 ft.

Lawrence County: Glen Dean 1,559 ft., Hardinsburg 1,580 ft., Golconda 1,654 ft., 6-in. 1,660 ft., drilling 1,815 ft.

Stockes & Kieffer 1 Rogers, NW SE SW 17-2n-12w, base Pennsylvanian 1,715 ft., Tar Springs 1,725 ft., Glen Dean 1,805 ft., Hardinsburg 1,853 ft., Golconda 2,000 ft., Cypress 2,040 ft., Cypress sand 2,080 ft., Paint Creek 2,120 ft., drilling 2,175 ft.

J. S. Young 1 Gerhart, N½ SE SE 20-4n-10w, location, first report.

Macoupin County: Dortomedge Oil 1 Hunsinger, SW NW NE 25-7n-7w, S.D. 35 ft.

Marion County: Carter 1 Morgan, SW SW NW 5-4n-3e, set 10-in. 162 ft., drilling 1,993 ft.

Morgan County: Magnolia 1 J. B. Keplinger, SW SW SE 28-13n-8w, set 10-in. 52 ft., drilling 390 ft.

Pulaski County: R. G. Williams et al 1 W. L. Richey, NE SE SW 9-15s-1e, Keokuk 400 ft., 6-in. 1,250 ft., 5½-in. 1,641 ft., drilling 1,715 ft.

St. Clair County: Burgess 1 Eidman, NW SW SE 18-1s-6w, S.D. 520 ft.

G. Morris 1-A V. Rasp, NW NW SW 32-2n-7w, drilling 1,860 ft.

Saline County: Potter 1 Sutton, SE SE SW 28-8s-7e, drilling 2,005 ft.

Shelby County: Oils, Inc., 1 Barkhurst, SW SW NE 7-10n-3e, T.D. 1,727 ft., P.B. 1,707 ft., putting on pump.

Washington County: Richardson 1 Kasten, SW SW SW 27-1n-2w, location, first report.

Wayne County: Olson Drlg. 1 Porter, W½ NW SE 36-1n-6e. T.D. 3,207 ft., McCloskv 3,194-97 ft., 3,201-2 ft., swabbed and flowed 546 bbl., natural, to acidize.

Yingling 1 Sindamare, E½ SW NE 28-1n-6e, set 10-in. 115 ft., drilling 1,194 ft.

Texas 1 F. M. Draper, N½ NW SW 8-3s-6e, T.D. 3,469 ft., P.B. 3,330 ft., perf. 3,296-3,302 ft., squeezed, drilled out to 3,330 ft., 2,000 gal. acid, pumped 25 bbl. in 3 hr., testing.

White County: Shaffer-Stole 1 Aud, SE NE SE 27-6s-9e, Cypress sand 2,656 ft., T.D. 2,678 ft., P.B. 2,554 ft., cleaned out to 2,660 ft., hole filled with 350 ft. fluid, testing.

Appalachian Fields

(Continued from Page 81)

Calhoun County

Center district: Hunt & Adams 1 Hunter M. Bennett, 200,000 cu. ft. gas, Injun sand, T.D. 2,008 ft.

Sherman district: Paul Bowser, agent, 2 McClellan Haught, 5 bbl., Injun sand, T.D. 2,163 ft.

Clay County

Pleasant district: Thompson Gas 53-T Thompson Land, 50,000 cu. ft. gas before shot, Injun sand, T.D. 2,289 ft.

Gilmer County

Center district: Pittsburgh & W. Va. 7803 Flossie Snodgrass, very light gas show, will abandon, Big Injun 2,163-2,242 ft., gas 2,235-42 ft., T.D. 2,285 ft.

Lewis County

Freemans Creek district: McCall Drilling 2 Griggs & Alfred, 2 bbl. and 50,000 cu. ft. gas, Blue Monday sand, T.D. 1,865 ft.

Lincoln County

Jefferson district: Bulger Gas 1 Gilbert Dotson, drilled deeper, started 2,392 ft., 641,000 cu. ft. gas, slate and shells 3,004-3,472 ft., brown shale 3,472-3,848 ft., gas 3,024 ft., 3,483 ft., 3,510 ft., 3,645 ft., 3,700 ft., 3,737 ft., 3,800 ft., 3,848 ft., 6,000-lb. shot gelatin, T.D. 3,867 ft.

Parsner Gas 2 A. and E. Elkins, 140,000 cu. ft. gas, brown shale, T.D. 3,834 ft.

Marion County

Lincoln district: Watson 2 Joseph Conaway, 100,000 cu. ft. gas, Pittsburgh coal 499-507 ft., Big Injun 1,852-1,987 ft., T.D. 2,001 ft.

Mason County

Graham district: New Haven Gas 9 Hartford Fuel, 450,000 cu. ft. gas, Berea sand, T.D. 1,836 ft.

Monongalia County

Clay district: Roy W. Clovis 2 Della Lemley, dry, gas sand, Pittsburgh coal 670-77 ft., T.D. 1,400 ft.

Mingo County

Warfield district: Virginian 1-289-V Henry Closterman, 2 bbl. and 80,000 cu. ft. gas, sand 1,090-1,334 ft., Maxton 1,400-56 ft., T.D. 1,471 ft.

Pleasants County

Jefferson district: Schultz Oil 9 T. C. Hammett, 10 bbl., Squaw sand, T.D. 1,880 ft.

McKim district: W. W. Watterson 1 W. M. Elliott dry, Injun sand, T.D. 1,700 ft.

Putnam County

Curry district: Tralick Gas 1 D. W. and W. L. Harper heirs, 119,000 cu. ft. gas, Big lime 1,345-1,528 ft., Big Injun 1,540-1,600 ft., Berea 2,053-76 ft., T.D 2,080 ft.

H. H. Baker, trustee, 2 Maude Smith, 60,000 cu. ft. gas, Big lime 1,639-1,818 ft., Big Injun 1,844-95 ft., Berea 2,328-53 ft., T.D. 2,373 ft.

Ritchie County

Grant district: P. J. McDonough 3 N. T. Mason, 25,000 cu. ft. gas, Injun sand, T.D. 1,842 ft.

Murphy district: W. H. Bickel 4 John H. Hyman, 352,000 cu. ft. gas, Injun sand, T.D. 2,210 ft.

Union district: Carnegie Natural 1 G. R. Vincent drilled deeper, 2 bbl., Big Injun sand, T.D. 2,013 ft.

Wayne County

Butler district: Farr Oil & Gas Co. 1 Elizabeth Gross, 3 bbl., Berea, T.D. 1,644 ft.

Lincoln district: Mullins Gas 2 fee, 73,000 cu. ft. gas, Big lime 1,155-1,320 ft., Big Injun 1,320-75 ft., slate and shells 1,955-2,686 ft., gas 1,270-75 ft., shot 1,951-2,686 ft., T.D. 2,686 ft.

Wetzel County

Proctor district: Manufacturers Light & Heat 3602 Henry Hohman et al, 42,000 cu. ft. gas, Pittsburgh coal 615 ft., Gordon sand 2,622 ft., T.D. 3,001 ft.

Wirt County

Burning Springs district: Richter Oil 3 M. Richter, drilled deeper, 212,000 cu. ft. gas, Injun sand T.D. 2,017 ft.

Clay district: W. C. Patterson 1 Berton Robinson, dry, Injun sand, T.D. 1,175 ft.

ORISKANY GAS FIELDS

Kanawha County

Elk district: South Penn 1 Lincoln Dodd, 4,770,000 cu. ft. gas before shot, Corniferous lime 5,054-5,191 ft., Oriskany 5,181 ft., gas 5,186-95 ft., T.D. 5,195 ft.

DRILLING

Poca district: Godfrey L. Cabot, Inc., 18 Putnam Co., top Corniferous 4,918 ft., 7-in. casing to 4,938 ft.

Godfrey L. Cabot, Inc., 1 Emmet Bowen, top Corniferous 5,129 ft., drilling 5,215 ft.

Godfrey L. Cabot, Inc., 4 Poca Coal Land Co., top Corniferous 5,129 ft.

Godfrey L. Cabot, Inc., 10 J. L. McLean heirs, top Corniferous 4,916 ft., Oriskany 5,023 ft.

Godfrey L. Cabot, Inc., 19 Putnam Co., top Corniferous 5,012 ft.

Union district: Godfrey L. Cabot, Inc., 1 V. F. Older, top Corniferous 4,705 ft.

Jackson County

Completions

Ripley district: McIntosh & Grimm 1 Austin Raines et al, 9,980,000 cu. ft. gas after shot, Corniferous lime 4,998 ft., Oriskany 5,110 ft., gas 5,114-42 ft., 20-qt. shot 5,122-42 ft., T.D. 5,142 ft.

United Fuel Gas Co. 5021 J. A. Shinn, 1,904,000 cu. ft. gas before shot, Corniferous lime 4,793 ft., Oriskany 4,897 ft., drilling at 4,938 ft.

Drilling

Ravenswood district; Spartan Gas Co. 1 J. L. Ayers, top Corniferous 4,745 ft., 7-in. casing to 4,760 ft.

United Fuel Gas Co. 5022 F. F. Starcher, top Corniferous 4,933 ft.

Ripley district: Godfrey L. Cabot, Inc., 1 C. M. Dooley, top Corniferous 4,816 ft., 7-in. casing to 4,836 ft.

Columbian Carbon Co. 5 Putnam Co., top Corniferous 5,129 ft.

Washington district: United Fuel Gas Co. 8 E. W. Perkins, top Oriskany 5,072-5,115 ft., lime break 5,115-34 ft., Oriskany 5,134-52 ft., drilling 5,167 ft., no gas showing.

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LOUISIANA GULF COAST

Delta Area Gets Third 1941 Discovery at Bastian Bay

By F. L. SINGLETON

NEW ORLEANS, La., Aug. 18.—Phillips 1 Louisiana Land & Exploration Co., a "tight" wildcat operation located in the Bastian Bay area, Plaquemines Parish, has been completed for a producer to open another field for the Delta area. The well is reported to be shut in for lack of storage after it gaged 260 bbl. of 35-gravity oil on a 20-hour test through a ¼-in. choke. Total depth of the well is 10,710 ft., and production is from perforated casing opposite oil sand at 9,350 ft. An electrical survey is reported to have logged another prospective sand at 9,100 ft.

The well is the third to be drilled on the prospect by the company and is several hundred feet from two other deep tests located in 38-20s-29e. The field is situated northwest of the Venice field, and due south of the Quarantine Bay field. It is the third field to be opened in the district this year, and is an inducement for the continuation of an active exploration program throughout the district.

LAKE CHICOT.—Amerada 1 State, a wildcat located in the Lake Chicot area, St. Martin Parish, looms as a prospective pool opener following an electrical survey which logged two sands showing oil. The sections were recorded from 7,719-42 ft. and from 8,029-40 ft. The well is drilling ahead in search of additional sands. Location is in 31-11s-10e, northwest of the Bayou Pigeon field and east of the Fausse Point field.

LAPYROUSE AREA.—In the Lapyrouse area, Terrebonne Parish, Gulf Refining Co. was attempting to complete 1 Picou, a 12,149-ft. hole, located west of Bayou Caillou in 70-20s-18e. An electrical survey recorded no shows from 11,998-11,401 ft. and a second survey at 11,998-12,143 ft. showed the same results. The company then plugged the hole back to test several sands previously logged by an electrical log. These sands were reported to have been logged at 10,930-52 ft., 10,876-94 ft., and 10,850-64 ft. After a drill-stem test through perforated casing at 10,852-94 ft. which tested a maximum pressure of 48 lb. and recovered salt water with no show of oil, the perforations were squeezed with cement and another test was being made. Seven-inch casing was cemented at 11,397 ft. The well is situated on a block of 7,000 acres located southeast of the De Large field, and southeast of the Bay Baptiste field, both of which produce distillate.

POINT AUR FER.—In the same parish, but located in the extreme west end of the Parish, Barnsdall 3 Nelson in 35-20s-11e, located on the Point Aur Fer prospect, is drilling in shale and sand below 7,115 ft. following two drill-stem tests in a shallow sand which tested some gas, salt water and no oil. Shale with streaks of sand with a gas odor was cored at 6,711-27 ft., shale at 6,727-52 ft., and sand with a gas odor at 6,751-74 ft. An 11-minute drill-stem test was attempted at 6,711-61 ft., but the seat of the testing tool slipped to 6,721 ft., and the well blew gas with no show of oil or salt water. A second 23-minute test at 6,746-76 ft., recovered three stands of salt water. The well is northeast of two dry holes, both of which were drilled to depths below 10,000 ft.

HAYES AREA.—Gulf 1 Calcasieu National Bank, located in the Hayes area, southeastern Calcasieu Parish, which blew out and caught fire July 20, extinguished itself when the hole bridged over sealing off the flow of gas which at one time was estimated at 100,000,000 cu. ft. daily. The company's 2 Calcasieu National Bank, located 800 ft. east of the blowout which was intended to be a relief well will be drilled as scheduled. At the time the well killed itself the crater around the blowout had grown to a diameter of 80 ft.

LA PLACE FIELD.—Additional development for the La Place field in St. John the Baptist Parish is anticipated following the completion of a pipe-line to Shell Oil Co., Inc., refinery at Norco. The field which produces mostly gas-distillate was discovered by the Shell Oil Co., Inc., but the company's holdings were later farmed out to Pan American Production Co.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Fields	11	1,577	89,257
Dry holes: Fields	3	.....	25,322
Wildcats	2	.....	18,946
Total	16	.....	133,525

LOUISIANA GULF COAST COMPLETIONS

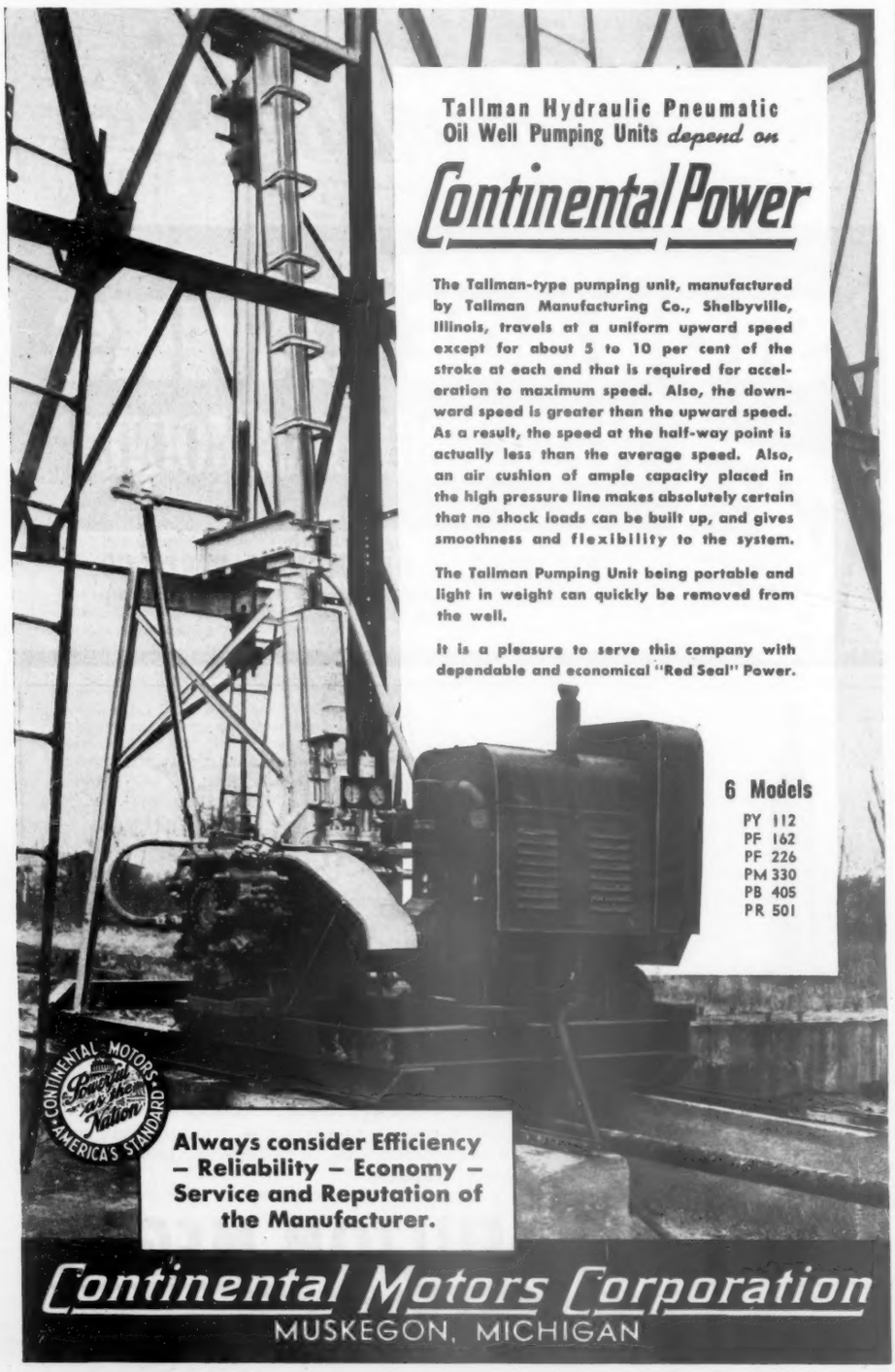
Wildcats

Calcasieu Parish: Pan American 1 Calcasieu National Bank, Moss Lake prospect, dry, T.D. 10,410 ft.
St. Landry Parish: J. A. Hafner 1 Hidalgo, dry, T.D. 8,536 ft.

Fields

Anse La Butte, St. Martin Parish: Stanolind 5 Bergeron, 46 bbl., 5/32-in. choke, T.D. 6,498 ft., P.B. 6,177 ft.
Barataria, Jefferson Parish: California 4-C Fleming, 181 bbl., 5/32-in. choke, perf. casing 7,622-50 ft., T.D. 7,652 ft.
Caillou Island, Terrebonne Parish: Texas 1 Caillou Island, dry, T.D. 8,069 ft.
Choctaw, Iberville Parish: Texas 1 Levy, 65 bbl. 14 hr., ¼-in. choke, perf. casing 8,507-82 ft., T.D. 8,880 ft.

(Continued on Page 93)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SOUTHWEST TEXAS

Deep Wilcox Trend Testing Encouraged by New Success

By F. L. SINGLETON

CORPUS CHRISTI, Tex., Aug. 18.—Exploration for deep sand production along the Southwest Texas sector of the Wilcox trend was further enhanced last week by the completion of Edwin M. Jones 3-B George West, a wildcat located about 4½ miles southwest of the town of George West. The well flowed at the rate of 167 bbl. of 46.7-gravity oil and 1,360,000 cu. ft. of gas daily through ⅛-in. choke. Tubing pressure was 4,375 lb., and casing pressure 4,725 lb. with a gas-oil ratio of 8,000 to 1. At the end of the week the well was placed on a ⅛-in. choke and will be allowed to clean slowly in an attempt to lower the gas-oil ratio.

Production is said to be from the Carrizo formation through perforated casing at 8,920-44 ft. This well was started as a Wilcox test in January, and, after blowing out in March at 9,030 ft., the hole was drilled deeper to a total depth of 9,733 ft., and 5½-in. casing was cemented after several sand sections in the Wilcox showed promise of production. However, drill-stem testing through a series of perforations showed only gas, distillate and water, and the hole was finally plugged back to the Carrizo, an upper member of the Wilcox formation.

The new discovery which has been named "George West" is situated on a block of approximately 8,000 acres centering around the Nelson Owen Survey 56, which was assembled on the strength of extensive geophysical work. It is the second deep test to be drilled on the structure and is several thousand feet from the same operator's 1-B George West, originally completed as a gas-distillate producer the previous year but later abandoned because of mechanical trouble. The well is located downdip from the West Tuleta field in Bee County in which distillate production has been opened, and in spite of the abandonment of several recently drilled deep tests, the completion places favorable light on the area and a continuation of deeper exploration is anticipated.

SUMMARY OF COMPLETIONS

Lower Gulf Coast District

	No.	Bbl.	Footage
Oil wells: Fields	7	596	39,638

Laredo District

	No.	Bbl.	Footage
Oil wells: Fields	12	1,646	45,117
Gas wells: Fields	1	.....	1,054
Dry holes: Fields	1	.....	1,572
Wildcats	4	.....	11,397
Total	18	.....	59,140

South Central Texas District

	No.	Bbl.	Footage
Oil wells: Fields	4	22	5,564
Dry holes: Fields	2	.....	3,700
Wildcats	3	.....	8,162
Total	9	.....	17,426

New Horizon
Established at Washburn

H. R. Cullen 3 Washburn, which opened a new horizon in the Washburn field, La Salle County, is flowing an estimated 16 bbl. of distillate daily while testing through a 3/32-in. choke. Total depth is 11,042 ft. in the Edwards lime, and production is believed to be coming from an unknown formation at 7,600-7,700 ft.

Gas-Distillate Production
Extended in McAllen Area

Gas-distillate production in the McAllen area, Hidalgo County, is believed to have been extended about 5,100 ft. southwest as W. R. Davis 1 Arizona-Texas Citrus Co. showed promise of production on a 36-hour drill-stem test. Total depth of the hole is 8,414 ft., and when tested through perforated casing at 7,610-30 ft., the well flowed 10 bbl. of amber-colored distillate, 5½ bbl. of salt water and 2,000,000 cu. ft. of gas. The perforations have been cemented off and another test is to be made in the same section. South of San Juan, the same company's 1 C. W. Dowley is drilling in sandy shale below 7,300 ft.

Willamar
Outpost Shows

One mile west of the Willamar field, Willacy County, Pan American 1 F. W. Burgess is bottomed at 7,984 ft., where 5½-in. casing was cemented following an electrical survey which showed gas sand at 7,817-23 ft., and oil sand at 7,845-77 ft. Gas-oil contact was logged at 7,845 ft., and the oil-water contact at 7,973 ft.

Good Well Brought in
On Odem Extension

Another producer has been completed in the southwest extension area of the Odem field, San Patricio County, as Wellington Oil Co. 1 Parker, a north offset to the discovery well, flowed 184 bbl. of 36-gravity oil daily through a 5/32-in. choke from perforated casing at 5,423-27 ft. Sand showing oil was reported to have been cored in a new section at 5,295-5,310 ft., but no drill-stem test was made. This is the best producer to be completed in the field, and the rig is being moved 933 ft. east of 1-C Welder for 3-B James. A new wildcat operation was reported for the county as Texon Royalty Co. rigged up for 1 Edwin Tutt, a 7,000-ft. test located in Block 1, Section 26, fourth addition to Taft Farm lands. The location is about ½ mile northwest of Republic Natural Gas Co. 1 A. A. Gallier, a gas well which is producing from sand at 5,110-36 ft.

New Tests
Announced

With the completion of the best producer in the Coloma Creek field, Calhoun County, the McSpadden company announced location for seven wells. The completion, 2-A Archie Clark, flowed 115 bbl. of 50-gravity distillate per day through ⅛-in. choke from perforation at 5,878-79½ ft.

Several interesting locations were announced for the district. In Duval County, Henderson Coquat is moving in material for 1 Southland Life Insurance Co. in the San Tos Flores grant, about 1 mile south of the Sweden townsite and 3 miles northwest of the Southland field. In Jim Wells County, 3 miles south of the Ben Bolt field, Earl Calloway and H. J. Mosser are preparing to drill a 5,700-ft. test on the A. M. Fowler lease in the La Trinidad grant, while in Bee County, Heyser & Heard staked location for 1 Huddleston, a Pettus sand test located about 4 miles east of Beeville in the Anna Burke Survey.

Wildcats Draw
Attention

A second producer for the South Campana field, McMullen County, seems assured as Argo Oil Corp. prepared to test 2 Edrington, a south offset to the discovery well. Drill-stem testing in the Pettus sand at 3,030-38 ft., recovered 160 ft. of pipe-line oil through a ⅝-in. choke, and 7-in. casing was cemented on bottom at 3,040 ft.

In the Balcones fault-line district and located in Wilson County, W. L. Marshall is reported to have cemented casing in 1 J. L. Sanders, preparatory to testing the Navarro sand at 1,072-82 ft. This is a wildcat located 2 miles northwest of Lavernia in the Francisco Herrera Survey.

Another wildcat operation which is being watched with interest is Humble 1 Rosa Wolf, 7½ miles north of Crystal City in Zavala County. The well is drilling ahead in shale below 5,797 ft., after coring lime with an oil show at intervals from 5,600-5,737 ft. Additional showings have been logged up the hole and a recent drill-stem test at 3,350-55 ft., recovered 55 ft. of mud and 5 ft. of oil. Location is in the Pedro Jose de Aguirre grant.

SOUTHWEST TEXAS COMPLETIONS
LOWER GULF COAST DISTRICT

Fields

Alfred, Jim Wells County: Wilcox Oil & Gas 1 R. Adams, 90 bbl., 5/32-in. choke, perf. casing 4,195-4,200 ft., T.D. 5,201 ft.

Ben Bolt, Jim Wells County: Bridwell 6 Smith, 66 bbl., ⅜-in. choke, sand 4,835-82 ft.

Midway, San Patricio County: William F. Morgan 2 Schmidt, 208 bbl., ⅛-in. choke, perf. casing 5,330-33 ft., T.D. 6,072 ft.

Minnie Bock, Nueces County: E. A. Graham 3-A Gandy, 76 bbl., ⅛-in. choke, perf. casing 5,832-40 ft., T.D. 5,900 ft.

Graham 1 Rutland, 75 bbl., jetting, perf. casing 3,710-15 ft., T.D. 3,826 ft.

Richard King, Nueces County: Southern Minerals 12 Walker, 11 bbl., distillate, T.D. 6,454 ft.

Stratton, Nueces County: Southern Minerals 23 Stratton, 70 bbl., ⅛-in. choke, perf. casing 6,694-99 ft., T.D. 6,703 ft.

LAREDO DISTRICT

Wildcats

Duval County: H. H. Howell 1 Parr, dry, T.D 5,010 ft.

Starr County: M. and L. B. Stewart 1 Down Royalty Corp., dry, T.D. 2,536 ft.

Webb County: Houser & Campbell 1 Benavides, dry, T.D. 2,712 ft.

H. E. Murray 1 Adami, dry, T.D. 1,139 ft.

Fields

Alta Mesa, Brooks County: Standard of Texas 5 Garcia, 48 bbl. fluid, 35 per cent b.s. and w., T.D. 2,665 ft., P.B. 2,510 ft.

Casa Blanca, Duval County: Texas 48 Duval County Ranch Co., gas well, perf. casing 1,025-28 ft., T.D. 1,054 ft.

Chiltipin, Duval County: Chiltipin 1 Tom Graham, 12 bbl., open tubing, T.D. 4,892 ft.

Colorado, Jim Hogg County: Humble 25-B King, 157 bbl., ⅜-in. choke, T.D. 3,039 ft.

Driscoll, Duval County: Continental 69-A Driscoll, 85 bbl., ¼-in. choke, perf. casing 3,330-50 ft., T.D. 3,352 ft.

Ezzell, Live Oak County: Cown & Davis 9 Swearingen & Miller, dry, T.D. 1,572 ft.

Killam, Webb County: O. W. Killam 17 Garcia, 70 bbl., pumping, T.D. 2,054 ft.

Lundell, Duval County: Government Wells Oil Co. 54 Lundell, 53 bbl., ⅝-in. choke, sand 1,543-55 ft.

Nichols, Hidalgo County: Royal Oil & Gas Corp. 2 Missouri Pacific, 126 bbl., ⅛-in. choke, perf. casing 3,915-17 ft., T.D. 3,920 ft.

North Rincon, Starr County: Sun 4 Saenz, 176 bbl., 9/64-in. choke, T.D. 4,745 ft.

Rincon, Starr County: Continental 57-B Slick, 189 bbl., ⅜-in. choke, T.D. 4,251 ft.

Continental 87-B Slick, 185 bbl., ⅜-in. choke, perf. casing 3,990-4,010 ft.

Sun, Starr County: Humble 2 Montalvo, 245 bbl., ⅜-in. choke, T.D. 5,563 ft., P.B. 4,750 ft.

Sun 11-A Montalvo, 300 bbl., ⅜-in. choke, perf. casing 4,868-72 ft., T.D. 4,875 ft.

SOUTH CENTRAL TEXAS

Wildcats

Bell County: Arthur Hobson 1 Moeller, dry, T.D. 2,007 ft.

Gillespie County: E. L. Nixon 1 Mogford, dry, T.D. 925 ft.

Real County: Evans, Love & Gant 1 Schreiner, dry, T.D. 5,230 ft.

Fields

Alta Vista, Bexar County: Kurt Petzold 2 Kelso, dry, T.D. 1,212 ft.

Gas Ridge, Bexar County: Southwest Drilling 23 Covell, sand 435-38 ft., T.D. 448 ft.

Lentz, Bastrop County: Wiegand Brothers 1 Lentz, dry, T.D. 2,500 ft.

Red Rock, Bastrop County: Wiegand Brothers 2 Carroll, 8 bbl., pumping, T.D. 2,480 ft.

Somerset, Bexar County: C. G. Newton 1 A. F. Ernst, 10 bbl. oil plus 10 per cent salt water, pumping, T.D. 1,500 ft.

Von Ormy, Bexar County: Nus-Wald Oil & Gas Co. 14 Trawalter, 1 bbl., pumping, T.D. 1,136 ft.

SOUTHWEST TEXAS DRILLING REPORT

Bee County: Hewitt & Dougherty 1 George Ray, J. Poitevent Sur., drilling shale 5,360 ft.

Heyser & Heard 1 C. E. Heard, 10 mi. SE of Beeville, Martin Michael and John Tool Sur., T.D. 5,308 ft., flowed gas with spray of 35.2-gravity oil on test through perf. casing at 4,764-67 ft.

Rowan & McBride 1 J. H. O'Connor, Phoebe Crain Sur., drilling shale 1,520 ft.

Brooke County: Sun 1 J. D. Cage, Sur. 141, drilling in sidetracked hole 5,089 ft.

Jim Hogg County: Seaboard 1 A. L. East, Sur. 53, drilling sandy shale 1,840 ft.

Plymouth 2 Sweeney, 9 mi. NW of Kelsey field, Las Animas grant, drilling shale 2,040 ft.

La Salle County: McCurdy et al 1 Cartwright, F. S. Bukley Sur. 236, top Carrizo 3,008 ft., drilling shale 3,687 ft.

Live Oak County: Rantex 1 M. A. Hinnant, Edward Quinn Sur., drilling shale 5,000 ft.

Starr County: F. A. Gillespie 1 V. G. Guerra, 4½ mi. S of Buena Vista, H.&G.N. Sur. 23, cored sand, oil and gas shows at intervals 1,292-1,325 ft., T.D. 2,156 ft., 7-in. casing 1,410 ft.

Webb County: Magnolia 1 Santo Tomas Ranch, 19 mi. SW of Callaghan, spudded.

Union Oil Co. of Calif. 1 Volpe, Sur. 2011, drilling sandy shale 5,260 ft.

Willacy County: Clark & Cowden 1 Yturria Cattle Co., San Juan de Carrecitas grant, drilling shale 7,639 ft.

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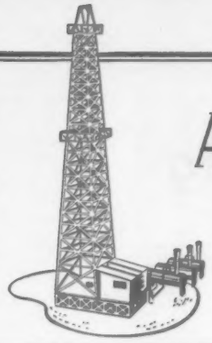


Among the Drilling

ROCKY MOUNTAIN Drilling Co., having contracted to drill for Standard Oil Co. of California in the new field discovered by Jasper Petroleum Co. 1¼ miles west of Havenstrite's Del Valle field, in California, has purchased a complete new rig which it has assembled at one of the mountainous locations in the field. All rigs used in this field are powered by internal-combustion engines.

FALCON-SEABOARD Drilling Co., Houston, Tex., has apparently extended gas-distillate production in the McAllen area, Hidalgo County, Texas, as W. R. Davis 1 Arizona Citrus Fruit Co., 5,100 ft. southwest of production, flowed 2,000,000 cu. ft. of gas and 10 bbl. of distillate on a drill-stem test through perforated casing at 7,610-30 ft. Testing continues. In the same county drilling continues below 7,300 ft. on the same company's 1 Dawley, located 2 miles south of San Juan.

RICHMOND Drilling Co., Midland, Tex., is drilling past 4,515 ft. in hard lime on the 1 Shell Oil Co., Inc.-State, in western Lea County, New Mexico, between the Maljamar and Vacuum pools. Slight showings of oil were logged from 4,381 to 4,387 ft. and from 4,406 to 4,416 ft. High on structure, the wildcat is located 660 ft. from the south and 1,980 ft. from the east line of 22-17s-33e.

ROWAN Drilling Co., Houston, Tex., has finaled another producer in the shallow sand on the Danbury dome, Brazoria County, Texas, with the completion of the company's 13 Jamison, which is showing for a producer while testing through perforated casing at 3,414-20 ft.

BELL & LOFFLAND, Inc., drilling contractors of Los Angeles, Calif., are drilling for Ohio Oil Co. in the field discovered by Jasper Petroleum Co. in the Newhall-Castaic district of California with a heavy rotary rig powered by two 350-hp. engines fuel on butane.

MANAHAN Drilling Co., Tulsa, has taken contract to drill Sinclair Prairie Oil Co. 1 T. K. Irwin, a 6,000-ft. test in SW SE SE 18-6s-12e, east of Bokchito, Bryan County, Oklahoma.

TRINITY Drillers, Inc., San Antonio, Tex., is moving a rotary to a new location in the Coloma Creek field, Calhoun County, Texas, following the completion of McSpadden Co. 2-A Archie Clark, completed as one of the best producers in the field. The completion extended production to the southeast and locations for seven new tests were announced.

KERN Drilling Co. has been awarded a contract by Western Gulf Oil Co. to drill 1 G. R. Wickham in the Castaic area, California.

RAY SHIELDS and A. L. Shirley of Mount Pleasant, Mich., have organized the drilling firm of Shields-Shirley with headquarters in that city. The contracting firm has purchased a truck-mounted 2,000-ft. rotary which is now on location in Deerfield Township, Isabella County, Michigan, for the L. & S. Drilling Co.

E. A. MOYES, drilling contractor of Bakersfield, Calif., has been awarded a contract to drill 2 Jacquelyn at Devil's Den, California, for Miesse & McCabe, independent operators.

FITZPATRICK Drilling Co., Corpus Christi, Tex., is preparing to test Sinclair Prairie 1 Volkner, a semi-wildcat located in the Texana area of Jackson County, Texas, following a drill-stem test which recovered pipe-line oil. Total depth of the hole is 5,780 ft. and 5½-in. casing was cemented below 5,200 ft., preparatory to testing a new sand at 5,102-07 ft.

LOFFLAND BROTHERS, Houston, Tex., is preparing to test Pan American 1 Burgess, 1 mile west of the Willamar field, Willacy County, Texas. Casing was cemented on bottom at 7,984 ft., following an electrical survey which showed promise of production in the regular field pay at 7,800 ft.

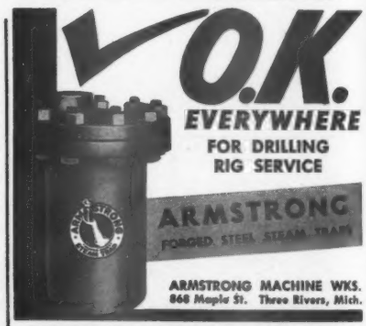
HENDERSON COQUAT, of Three Rivers, Tex., is moving a rotary to Duval County, Texas, for a Pettus sand test located on the Southland Life Insurance Co. lease, 1 mile south of the Sweden townsite.

CROSBY Drilling Co., Houston, Tex., is moving a rotary to the Lissie area, Wharton County, Texas, where location has been made for the company's 1 Poole, a projected deep test located in the A. J. Fry Survey.

OAKWOOD Drilling Co., of Oklahoma City, Okla., has contract from Bruce Sullivan of Fort Worth to drill two deep tests. On a 4,000-acre farmout from the British American Producing Co. a 6,000-ft. test is planned. Tentative location has been staked in the J. M. Seaton Survey, about 4 miles south of Crowell, Foard County, Texas. Drilling operations will start on or before September 1. The second test is contracted to 4,200 ft. It will be drilled in Cottle County, Texas, in the center of NW Section 24, Block M, Thompson Survey. Drilling is scheduled to start on or before October 1.

R. P. THRAUGH has contracted to drill Brown & Laves 1 Stephenson, C. Quillen Survey A-989, on a 1,700-acre block east and northeast of the Collinville area of southwestern Grayson County, Texas. The test will be drilled with rotary and is contracted to 4,100 ft., but operators will test all horizons which have had shows in other holes in the area.

RHODES Drilling Co. is spudding a 4,000-ft. wildcat for Merry Bros. &



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Contractors

Perini located in northwestern Coleman County, Texas. The test is on the C. M. Greer farm, southwest part of Subdivision 2, H. Kegans Survey 520. It is midway between the old Goldsboro pool and the Novice pool, which produces from shallow sands.

MID-CONTINENT Drilling Contractors, of Dallas, Tex., are drilling below 2,250 ft. on a 3,000-ft. contract for Jim Owens at 1 Ray ranch. The wildcat is located in the Hardwick Survey on a 900-acre block and is 15 miles west of Valley View in Cooke County, Texas. Operator reports two saturated-sand zones. One was found from 2,107 to 2,114 ft. and the second from 2,144 to 2,162 ft.

ROCKY MOUNTAIN Drilling Co. of Los Angeles, Calif., has been awarded a contract to drill a Baldwin Hills test for Standard Oil Co. of California to be known as 2-13 Vickers. L. A. Whipple will be tool pusher in charge.

J. R. SHARP Drilling Co., Midland Tex., opened the first oil production in Lubbock County, West Texas, last week at the L. C. Harrison et al 1 W. G. Nairn estate. The discovery is 3 miles northeast of Lubbock and some 35 miles from the Slaughter field, nearest oil production. On a 3-hour swabbing test after acidizing with 2,000 gal., the well yielded 18 bbl. of 31.5-gravity oil per hour. Located in the SE cor. of Section 25, Block A. John H. Gibson Survey, the discovery is producing from a main pay topped at 4,889 ft. with total depth at 4,916 ft.

MARTIN THOMPSON Drilling Co., San Antonio, Tex., has been awarded contract for drilling a 6,500-ft. wildcat in Southwest Texas by Randon Production Co. The test will be located on a 15,000-acre block in the Joseph Dillard Survey of Gonzales County; it will test the Wilcox and Midway sands.

UNGREN & FRAZIER, Abilene, Tex., has been awarded contract for drilling a new wildcat in Taylor County, West Central Texas, by Hedrick Oil Co. of Wichita Falls, Tex. The test will be drilled as the Hedrick 1 H. R. Arrant, on a site 3 miles northeast of Abilene in Section 53-16, T.&P. Survey. Pits have been dug and machine was being moved in the first of this week.

PARKER Drilling Co., Tulsa, at last reports was drilling at about 10,250 ft. at the Gulf Refining Co. 1 Bateson, Bay County, Michigan, wildcat. The test has already set a new Michigan depth record and should it be carried past 10,286 ft. it will establish a record depth for wells east of the Mississippi River. Location of the wildcat is in C S½ SE SE 2-14n-4e; objective is the St. Peter sand expected at about 10,500 ft.

TAGGART BROTHERS, INC., Big Rapids, Mich., last week was awarded rotary contract by Weber Oil Co for three new wells in the Reed City area of Lincoln Township, Osceola County, Michigan. All of the three wells are in Section 30-18n-10w, on the west side of the rapidly growing new field.

L. O. Slaughter, Jake Hoepfner, Jelly Bell, and Ralph Hoepfner face the camera while drilling for Fain-McGaha Oil Corp. in the K.M.A. deep Ellenburger (Ordovician) area of Wichita County, North Texas

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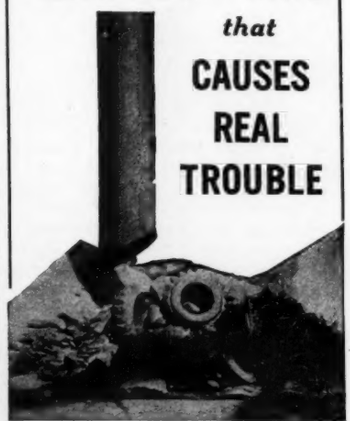
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Wilcox Trend Wildcatting Spreads Into Six Parishes

By GEORGE WEBER

SHREVEPORT, Aug. 18.—Wildcatting activity in the Wilcox area of North Louisiana increased last week with the staking of five new tests and reports of still further operations. Drilling obligations, coupled with recent strikes are responsible for much of the current spurt. Most of the area is held in large lumber company blocks, and exploration might be expected to be slower.

Latest strike was a new gas field officially opened in Caldwell Parish, the first such discovery of the parish. Big West Drilling Co. completed 1 A. Lowe, SE SE 36-12n-3e, for an estimated 15,000,000 cu. ft. initial gage. The wildcat was bottomed at 4,009 ft., but operators plugged back and completed through perforations at 2,173-78 ft., about 572 ft. below the top of the Wilcox formation. Rock pressure on the new well was 920 lb.

A record total of 17 wildcats are now staked or drilling in the Wilcox trend, extending into La Salle, Caldwell, Catahoula, Winn, Grant and Franklin parishes. In Catahoula Parish, the Larto Lake test of Carter Oil Co. and Phillips Petroleum Co., the 1-B Tensas Delta Land Co., had drill stem stuck. The test is bottomed at 6,000 ft. and although no information is being released on the test's prospects, operators were preparing to run casing, and it is reported that it had shows of oil or gas.

In Grant Parish, the H. L. Hunt 1-F Goodpine, NW NW 12-8n-2w, is reported to have oil shows at 1,800 ft., although it is drilling below 4,000 ft. The La Salle Parish test, Aden Oil Co. 1 Grey, NE NE 36-8n-2e, was to set casing after electrical log was run and side-wall cores were taken. Possible production is indicated on the electrical log at 3,240-65 ft., 3,317-25 ft. and 3,190-96 ft.

Delta Drilling Co. 1 Hughes, also in La Salle Parish, is waiting on cement after squeezing perforations at 1,463-67 ft., which tested 15,000,000 cu. ft. of gas several days ago. Scruggs & Todd tested oil in 1 Pipes, NW NE 19-8n-3e, last week as testing of several prospective horizons in the Wilcox began. Several sands between 3,130-3,235 ft. show oil or gas production possibilities. After setting casing at 3,614 ft., operators perforated the lowest sand at 3,232-36 ft. with 14 shots and tested 10 bbl. hourly of fluid, 90 per cent salt water. The perforations were squeezed, and operators will retest.

SUMMARY OF COMPLETIONS

North Louisiana

	No.	Bbl.	Footage
Oil wells: Bellevue	1	21	430
Caddo	3	125	5,765
Nebo	2	186	7,775
Olla	3	721	7,070
South Olla	1	125	2,886
Gas wells: Wildcats	1	*15	4,009
Ajax	1	*10	3,209
Dry holes: Ajax	1	.....	3,230
Wildcats	1	.....	6,022
Total	14	.....	40,396

Arkansas

Gas wells: Dorcheat	1	†156	8,965
McKamie	2	†824	18,706
Dry holes: Fouke	1	.....	3,810
Wildcats	1	.....	4,000
Smackover	1	.....	2,290
Total	6	.....	37,771

*Million cu. ft. †Condensate, bbl.

NORTH LOUISIANA COMPLETIONS

Bellevue, Bossier Parish: Premier Inv. Co. 51 Wyche, NW NW NW 14-10-11, pumped 35 bbl., 40 per cent salt water, T.D. 430 ft., 7-in. casing 278 ft.
Caddo, Caddo Parish: C. C. Crews 4 Stiles, SE NE SW 33-21-16, pumped 50 bbl., T.D. 1,862 ft., 5⅛-in. casing 1,847 ft.
Hyman Ginsberg 1 Ark. Fuel Oil Co., NW NE NE 35-21-16, pumped 10 bbl. oil, 50 bbl. salt water, T.D. 2,285 ft., 6⅝-in. casing 2,241 ft.
Texas Co. 54 C.M.L., NW NW SE 22-21-15, pumped 65 bbl. oil, 10 bbl. salt water, T.D. 1,618 ft., 6⅝-in. casing 1,482 ft., 4,000 gal. acid.
Wildcat, Caldwell Parish: Big West Drlg. Co. 1 A. Lowe, SE SE 36-12n-3e, 15,000,000 cu. ft. gas, open flow, R.P. 920 lb., T.D. 4,009 ft., 5½-in. casing 2,850 ft., perf. 2,173-78 ft., Wilcox.
Ajax, De Soto Parish: W. Paul Edman et al 1 Tanner est., SE SE NE 13-10-11, est. 10,000,000 cu. ft. gas, spray salt water, slight show oil, T.D. 3,209 ft., 5½-in. casing 3,200 ft., Paluxy.
G. H. Neighbors 1 King, SE SE SE 12-10-11, T.D. 3,230 ft., dry, tested small show gas in Nacatoch, 1,310-20 ft.
Nebo, La Salle Parish: H. L. Hunt 4-C Goodpine, SW SW 28-8-3e, 43 bbl., 40 per cent salt water, input gas, T.D. 7-in. casing 3,638 ft., perf. 3,386-3,419 ft., Wilcox.
H. L. Hunt 52-F Goodpine, NE SE 9-7-3e, 160 bbl., 13/64-in. choke, T.P. 700 lb., C.P. 1,100 lb., T.D. 4,137 ft., 7-in. casing 4,123 ft., perf. 3,774-78 ft., Wilcox.
Olla, La Salle Parish: Ark. Fuel Oil Co. 3-B Nugent, SE SW 24-10-2e, 288 bbl., 3 per cent salt water. ⅞-in. choke, T.P. 225 lb., C.P. 500 lb., T.D. 2,255 ft., 7-in. casing 2,237 ft., perf. 2,194-98 ft., Wilcox
H. L. Hunt 32-F Goodpine, NW NW 19-10-3e, 250 bbl., 5 per cent water, 16/64-in. choke, T.P. 210 lb., C.P. 420 lb., T.D. 7-in. casing 2,392 ft., perf. 2,242-52 ft., Wilcox.
Placid Oil Co. 103 La. Central, SW SE 3-9-2e, 204 bbl., 15 per cent salt water, input gas, T.D. 2,423 ft., 7-in. casing 2,423 ft., perf. 2,054-85 ft., Wilcox.
South Olla, La Salle Parish: Placid Oil Co. 5-B Goodpine, NE NE 27-9-2e, 125 bbl., ½-in. choke, T.P. 60 lb., C.P. 350 lb., T.D. 2,886 ft., 7-in. casing 2,886 ft., perf. 2,563-66 ft., Wilcox.
Wildcat, Natchitoches Parish: Rhodes & O'Mara 1 Prudential Life Ins. Co., NE SE 36-11-10, T.D. 6,022 ft., dry.

NORTH LOUISIANA ACTIVE WILDCATS

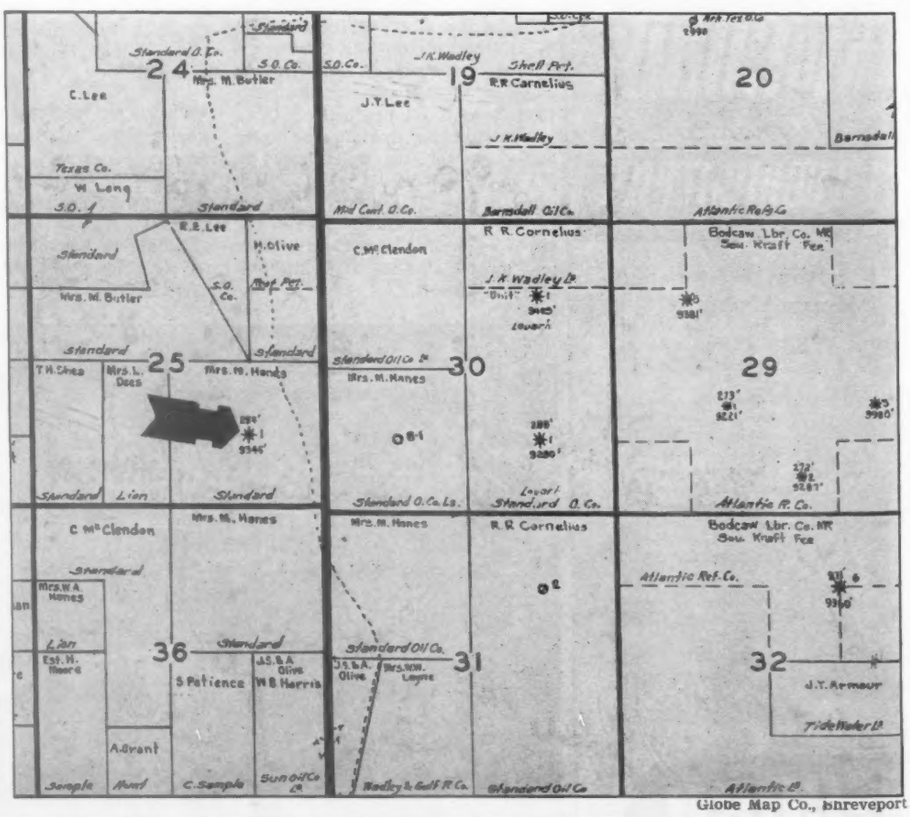
Bienville Parish: R. E. Collins et al 1 Madden heirs, SW SW SE 3-16n-8w, T.D. 200 ft., repair rig.
Caldwell Parish: Southern Carbon Co. 1 Howard, SW SE 13-14n-4e, drilling 3,550 ft.
Catahoula Parish: O. C. Borah 1 Womack, irreg. 54-9n-5e, S.D 2,535 ft.
Carter Oil Co. et al 1-B Tensas Delta, NE SE 15-5n-5e, running 7-in. casing 6,000 ft.
H. L. Hunt 2-A La. Central, NW SE 9-9n-6e, plugged 2,900-3,280 ft., crooked hole.
Claiborne Parish: Big West Drlg. Co. 1 Alford, C W½ 11-21-4w, reaming to set casing 5,300 ft.
Crow Drlg. Co. 1 O'Bannon, NW 30-22n-4w, T.D. 5,431 ft., prepare to abandon.
Hunt Oil Co. 1 Mitchiner, NE SW SW 15-23-7, drilling 4,170 ft.
Union Producing Co. 1 McDonald unit, SW NE SW 13-21-5w, rigging up.
Franklin Parish: Grubb & Hawkins 1 Campbell, SE NE 1-11n-7e, drilling shale 3,078 ft.
S. J. Ryan 1 Womble, NW NW NW 11-12n-8e, W.O. 4,510 ft.
Grant Parish: H. L. Hunt 1-F Goodpine, NW NW 12-8n-2w, T.D. approx. 6,000 ft., prepare to abandon.
E. F. Neely 1 McAdams, NE SE 19-6n-2e, S.D. 4,277 ft., rig repairs.
La Salle Parish: Aden Oil Co. 1 Grey, NE NE 36-8n-2e, T.D. 3,372 ft., ran electric log, prepare set casinng.
Delta Drlg. Co. 1 Hughes, NE NE SW 22-8n-1e, old T.D. 4,092 ft., 5½-in. casing 1,509 ft., squeezed perf. 1,463-67 ft., waiting on cement.
Placid Oil Co. 7-A Tremont, NE SE 24-9n-1e, coring 2,380 ft.
Scruggs & Todd 1 Pipes, NW NE 19-8n-3e, oil and gas shows from 3,133 to 3,235 ft., perf. casing 3,232-36 ft., tested 10 bbl. per hour, 90 per cent salt water, squeezed.
Natchitoches Parish: A. F. Carter 1 Culpepper, irreg. 36½-8n-7w, 10-in. casing 103 ft., waiting on cement.
E. H. Demetrio 1 Winn, SE NW 25-10-10, S.D. 476 ft., rig repair.
W. A. Jacobson et al 1 Leopold Plantation, SW SE SE 33-11-9w, fishing bit, T.D. 685 ft.
West Carroll Parish: R. W. Crowe, Tr. 1 Bruce Lbr. Co., SE 16-21-9e, S.D. 6,285 ft., awaiting orders.

NORTH LOUISIANA NEW WILDCATS

La Salle Parish: Joe L. May et al 1 La. Delta, SW NW 20-7n-4e, location.
H. L. Hunt 8-B Tremont, SW SW 11-9n-2e, derrick.
H. L. Hunt 18-F Goodpine, SW NW 4-6n-3e, location.
H. L. Hunt 19-F Goodpine, NE SW 36-9n-4e, location.
Lincoln Parish: Thos. Richmond et al 1 Emery, 8-18n-1w, location.
Natchitoches Parish: C. Porter Johnson 1 Lacaze, 660 ft. N, 150 ft. W SE cor. irreg. 63-6n-4w, 12½-in. casing 205 ft.
Red River Parish: Republic Prod. Co. 1 Timon, irreg. 39-11n-9w, derrick.
Winn Parish: H. L. Hunt 2-F Goodpine, NW SE 13-9n-3w, drilling 1,515 ft.

McKamie Is Extended West and South

The McKamie field gained two more gas-condensate wells this week, for extension west and south. Carter Oil Co. 1 Hanes came in making 432 bbl. of 58-gravity product at a gas-oil ratio of 5,480 cu. ft. per barrel



Globe Map Co., Shreveport

The McKamie field of Lafayette County, Arkansas, indicates a major gas-condensate reserve. Last week, completion of two wells extended the field on the south (Atlantic Refining Co. 6 Bodcaw) and west, (Carter Oil Co. 1 Hanes). Drilling is on 160-acre spacing, set for the gas field by the Arkansas Oil and Gas Commission

to extend production for the field 1 mile westward.

On the south, Atlantic Refining Co. extended production ½ mile by completing 6 Bodcaw at a gas-oil ratio of 8,000 cu. ft. per barrel. The latter well has 118 ft. of section in the main porosity of the Smackover lime. It ran about 33 ft. lower than the company's 2 Bodcaw, located due north, marking the dip in the lime to the south of production.

Wildcats Near Smackover Lime

Lafayette County will be closely watched as two deep Smackover lime wildcats approach critical depth and a third is staked for early spudding.

Macedonia-Dorcheat Map Released

Two new locations for the Macedonia gas-condensate field were announced last week. They will be drilled on 80-acre spacing pattern recently set for the new pool by the Arkansas Oil and Gas Commission. A recently released contour map of Dorcheat and Macedonia, presented as testimony before the Arkansas Oil and Gas Commission, indicates that Dorcheat will be extended to double its present proven size, but will not join with Macedonia, 4½ miles to the east. A shallow saddle between the two fields is indicated by geophysical data.

AVERAGE DAILY PRODUCTION

NORTH LOUISIANA

	Aug. 16	Aug. 9
Caddo light	6,140	6,110
Caddo heavy	2,220	2,305
Cotton Valley	11,190	18,190
Cross Lake	2,785	2,800
De Soto and Red River	1,000	1,010
Haynesville	2,575	2,590
Homer	2,850	2,875
Lisbon	2,900	2,915
Nebo	2,485	2,310
Olla	13,390	13,190
Rodessa	14,485	14,575
Sligo	2,375	2,385
Sugar Creek	1,400	1,420
Urania	2,225	2,240
Zwolle	1,140	1,130
Total North Louisiana	72,650	79,315

SOUTH ARKANSAS

Atlanta	2,965	2,980
Buckner	2,235	2,220
Champagnolle	900	925
Dorcheat	2,090	1,940
El Dorado	1,525	1,535
Magnolia	20,000	20,080
Nick Springs	840	860
McKamie	3,725	3,230
Rodessa	1,380	1,400
Schuler	16,525	16,580
Smackover light	1,900	1,905
Smackover heavy	12,905	12,870
Troy	940	950
Urbana	2,400	2,410
Village	1,050	1,050
Total South Arkansas	74,215	73,580

MISSISSIPPI

Tinsley	49,010	47,245
Pickens	570	580
Total Mississippi	49,580	47,825

ARKANSAS COMPLETIONS

Dorcheat, Columbia County: C. H. Lyons 1 Henry, NE NE 15-18-22, 156 bbl. condensate, ½-in. choke, C.P. 2,800 lb., T.P. 2,500 lb., T.D., 5½-in. casing 8,965 ft., perf. 8,910-15½ ft., Smackover.

Wildcat, Columbia County: L. L. Prock 1 Young, NE SE 21-15-21, T.D. 4,000 ft., dry.

McKamie, Lafayette County: Atlantic Ref. Co. 6 Bodcaw, NE 32-17-23, 392 bbl., condensate 14/64-in. choke, T.P. 2,900 lb., C.P. 3,100 lb., T.D. 9,360 ft., 5½-in. casing 9,375 ft., perf. 9,096-9,130 ft., Smackover lime.

Carter Oil Co. 1 Hanes, SE 25-17s-24w, 432 bbl. condensate, T.P. 2,600 lb., 58 gravity, T.D. 9,346 ft., 6-in. casing 9,343 ft., perf. 9,264-88 ft., Smackover lime.

Fouke, Miller County: Carter Oil Co. 1-D Sturgis, NW NW NW 12-17s-27w, T.D. 3,810 ft., dry.

Smackover, Union County: C. & D. Oil Co. 1 C. L. Saxon, W½ SW SW 4-16-16. T.D. 2,290 ft., dry.

ARKANSAS ACTIVE WILDCATS

Clark County: Coker Oil Co. 1 McMillan & Cane, SW NE NE 34-10-19, T.D. 790 ft., S.D. rig repair.
Coker, Grieves et al 2 Williams, NE NE 7-11s-19w, waiting on cement 605 ft.

Howard County: DeGrazier et al 1 Dierks Lumber Co., SW SW 7-8s-28w, drilling 686 ft.

Lafayette County: Ohio Oil Co. 1 Graner, NW SW 13-16s-24w, drilling 5,420 ft.
Tide Water and Seaboard 1 Moore, SW SE 29-17s-24w, drilling 7,980 ft.

Lee County: Stanley A. Thompson 1 Comer, NE NE NE 17-3n-2e, T.D. 2,569 ft., rig repair.

Ouachita County: Theodore Davis 1 Fort Smith Timber & Land Co., NW SW 16-12-17w, S.D. 35 ft.

Prairie County: Alvin E. Stark 1 Fidelity Mutual, NE NE NW 16-2n-6w, S.D. 1,300 ft.

Saline County: A. W. Given 1 Williams, NW NE NE 18-3s-15w, T.D. 1,090 ft., running 6-in. casing.

Union County: Delta Drlg. Co. 1 Pickering, SE NW 32-18s-16w, drilling 2,100 ft.

EAST TEXAS BORDER ACTIVE WILDCATS

Cass County: W. A. Patterson 1 Orr, G. W. Morris Sur., S.D. 2,280 ft.

Harrison County: Capps Bros. 1 H. L. Eldridge, J. B. Crain Sur., drilling 2,100 ft.
M. T. Saye 1 W. L. Blocker est., M. S. Ussury Sur., S.D. 40 ft.

Marion County: W. M. Blackshear 1 S. Chatten, I. N. Jones Sur. 215, drilling 3,100 ft.
A. H. Carpenter et al 1 T. G. Allen, Robert Potter Sur., T.D. 2,605 ft., pumping salt water, slight show oil.

Panola County: John G. Mayo and Crow Drlg. Co. 2 Frost, J. M. Woolworth Sur., spudded.

Sabine County: Sturm & Womack 1-A Keith, L. Groce Sur., prepare squeeze 4,383-91 ft.

St. Augustine County: Roper & Todd 1 Long Bell, N. Hyden Sur., fishing 5,063 ft.

Shelby County: A. E. McKlernan 2 Pickering Lumber Co., G. H. Patterson Sur., spudded, S.D.
Grady Vaughn 1 Frost, Buckley Sur., drilling 1,470 ft.

Rocky Mountain Area

(Continued from Page 82)

Bosworth & Shubat 1 Lukenbill, C SW NE 11-36n-2w, T.D. 1,926 ft., contact 1,919-23 ft., 1,700 ft. water, will shut off with 5½-in. and drill deeper.

M. F. Toles 12 Norum, SW SE SW 33-35n-2w, T.D. 1,522 ft. in Madison, P.B. to 1,510 ft., to test.

R. G. Parrant 1 McAlpine, SW NW SE 25-37n-3w, S.D. 280 ft.

Casper T. Olen 3 Government, NW SW NE 14-35n-2w, S.D. 870 ft.

Nepstad Oil 2 Hugi, NE SE NW 11-35n-3w, T.D. 1,844 ft., acid, second time, no results, standing.

Enfield Oil 4 Zachor, SE NW NW 20-35n-1w, T.D. 1,600 ft., contact 1,583-1,600 ft., 200 ft. oil in hole, acid. 1,000 gal.

Adlon Oil & Mines 3-X Ward, SW SW SE 29-35n-3w. T.D. 1,735 ft., contact 1,728-35 ft., show oil, acid. 1,000 gal., testing.

R. G. Parrant 1 Bannister, SW SE SW 35-37n-3w, S.D. 40 ft. (cor.).

Big West Oil 8 Ellingson, C SE SW 14-35n-3w, T.D. 1,650 ft., contact 1,640-46 ft., tested 40 bbl. fluid, 50 per cent oil, will acidize.

A. E. Crumley & Son 22 Fryberger, NW NW SE 24-35n-3w, drilling 800 ft.

E. W. Morton 3 Ellingson, CNL NE NW 23-35n-3w, standing 1,724 ft., first report.

Superior Pet. 3-A Government, SE SE NW 24-35n-3w, T.D. 1,616 ft., contact 1,600-12 ft., show oil, will acidize.

NORTHWEST NEW MEXICO DRILLING REPORT

San Juan County: Al Greer 2 Thompson, SW SE SW 10-30n-11w, drilling 2,115 ft.

Carroll & Cornell 3 Cornell-Government, C NW SW 12-29n-12w, moving in, Fulcher basin.

Southern Union Production 2 Reid-Government, NE SE NE 13-29n-12w, spudded, Fulcher basin.

Torrance County: Cardinal Oil 1 State, SE SW 3-8n-14e, drilling 705 ft.

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GAUGES

New Sand Tapped by Texana Outpost Across Fault Line

By NEIL WILLIAMS

HOUSTON, Tex., Aug. 18.—Attention in the upper Texas Gulf Coast district was centered on the Texana area, Jackson County, where preparations were being made to test a semiwildcat which has shown promise of opening the first oil production from a new sand. The well is Sinclair Prairie 1 Volkner about 3,000 ft. northwest of the discovery well which is standing with 5½-in. casing cemented at 5,252 ft., preparatory to testing sand at 5,102-07 ft. where a 12-minute drill-stem test the previous week recovered an estimated 1,000 ft. of pipe-line oil and tested 43 lb. working pressure. Shale and sand showing oil and gas were cored at intervals from 5,042-5,117 ft.

Texana was opened in 1939 by Moore & Ahern 1 Drushel which is flowing gas-distillate from perforated casing at 5,602-17 ft., and while the Sinclair test is located on the same structure, production is believed at this time to be separated by a faulted condition in view of the fact that the discovery pay, cored in 1 Volkner, carried salt water. The field is located northwest of the Lolita field, and northeast of the West Ranch field. Protection around the Sinclair test is held by several independent and major companies and as most of the acreage was taken on short term leases, an active drilling program is anticipated.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: West Ranch	3	607	17,917
Other fields	14	2,357	94,228
Gas wells: Fields	2	.....	9,698
Dry holes: Fields	3	.....	10,443
Wildcats	6	.....	37,959
Total	28	.....	170,245

Second Producer Completed At Oyster Bayou

The newly opened Oyster Bayou field, Chambers County, looms as an important discovery following the completion of a second producer which extended production several hundred feet. The well is Sun 4 Jackson which flowed 271 bbl. of pipe-line oil in 10 hours through a ¼-in. choke. Gas sand was topped at 8,135-70 ft., oil sand at 8,200 ft., and completion was made by perforating casing at 8,267-85 ft. The sand section was topped about normal with the discovery well, completed in April at 8,250-80 ft.

New Sands Show At Sabine Pass

In the Sabine Pass field, offshort from Jefferson County in the Gulf of Mexico, British American Oil Producing Co. has logged interesting showings in two wells and pipe is expected to be cemented for production tests. Sand showing oil was logged at intervals in 2-A State at 4,020-4,207 ft., and the well is temporarily shut down at a total depth of 4,600 ft. The sand section is apparently a new one for the field being several hundred feet higher than the discovery well, completed in sand at 4,982-92 ft. No. 1-C State tested 400 lb. working pressure and flowed an estimated 3,100,000 cu. ft. of sweet gas daily on a drill-stem test at 5,077-80 ft. The well was cored ahead logging sand and shale showing oil at 5,083-90 ft., and the well is waiting on orders following two unsuccessful drill stem tests. Both tests are offsets to the discovery well.

JOE'S LAKE.—Prospects of opening deep-sand production in the Wilcox formation in the Joe's Lake field, Tyler County, continues discouraging as Republic 52 Hurd-fee continues testing with only minor showings reported. After testing several shows below 10,000 ft., the hole was plugged back to 9,858 ft., and after swabbing wash water with a slight show of oil and gas, tubing was being pulled, preparatory to reperforating for another test.

CLODINE FIELD.—In the Clodine field, Fort Bend County, Providence Oil Co. was attempting to extend gas-distillate production northeastward as preparations were being made to test 1 Wing. Total depth of the hole is 7,536 ft. with sand logged in the discovery pay at 7,484-7,515 ft.

NEW WILDCATS.—Additional wildcat activity was reported for the district as locations for two tests were announced for Hardin and Wharton counties. Approximately 1½ miles southwest of the West Silsbee field, Hardin County, Republic Production Co. and Houston Oil Co. are moving in material for 1 Gus Hooks in the Alexander Hampton Survey, while in the Lissie area, derrick is up for Crosby Drilling Co. 1 Poole. Location is in A. J. Fry Survey, south of Strake 1 Poole, an abandoned well which logged encouraging showings.

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Illustrated at right, an important Cleveland feature—Truck Speed Transportation on specially built trailers—Machines load or unload in about 15 minutes.

TEXAS GULF COAST COMPLETIONS

Wildcats

Fort Bend County: H. C. Cockburn 1 W. C. Leveridge, dry, T.D. 7,880 ft.
Harris County: Little York 1 Dixon, dry, T.D. 4,120 ft. Harold Taylor 1 Swilley, dry, T.D. 5,000 ft.
Orange County: Superior Oil Corp. 1 East Beaumont Townsite Co., dry, T.D. 7,010 ft.
Walker County: Mike Hogg 1 Gibbs, dry, T.D. 7,944 ft.
Washington County: Mt. Selman 1 Fruelberg, dry, T.D. 6,005 ft.

Fields

Blue Ridge, Fort Bend County: Mills Bennett 7 Lusher, dry, T.D. 3,963 ft. Wright Drilling 1 J. M. Davidson, dry, T.D. 4,201 ft.
Caplen, Galveston County: Sun 8 Zinn & Foreman, 95 bbl., 16½ hr., ⅛-in. choke, perf. casing 7,195-7,205 ft.
Dyersdale, Harris County: Jack Frazier 1 Joe Kennedy, gas well, perf. casing 3,492-98 ft., T.D. 4,135 ft.
Fannett, Jefferson County: Gulf 1 R. S. Jackson, 184 bbl., ⅛-in. choke, T.D. 8,323 ft.
Ganado, Jackson County: Texas 1 Tunison, 174 bbl., ⅛-in. choke, perf. casing 6,452-56 ft., T.D. 6,686 ft.
Garwood, Colorado County: W. R. Davis 5-A Brownston, 234 bbl., ⅛-in. choke, perf. casing 6,104-10 ft., T.D. 6,150 ft.
Hillje, Wharton County: Texas 4 Peters, 76 bbl., ⅛-in. choke, T.D. 5,238 ft.
League City, Galveston County: Phillips 11 Lobit, 192 bbl., ⅛-in. choke, perf. casing 8,687-90 ft., T.D. 8,750 ft.
Lolita, Jackson County: Barnsdall 7 Lazarus, 141 bbl., 7/64-in. choke, sand 5,270-78 ft., T.D. 5,285 ft. Humble 17-A L. Ranch, 64 bbl., ⅛-in. choke, T.D. 5,942 ft.
Lovells Lake, Jefferson County: Humble 1-B Jefferson Land Co., 60 bbl., ⅛-in. choke, perf. casing 7,810-11' ft., T.D. 7,832 ft.
Markham, Matagorda County: Hamill & Hamill 2-B Hudson, dry, T.D. 2,279 ft.
Old Ocean, Matagorda County: Harrison & Abercrombie 9 Armstrong, 422 bbl., ¼-in. choke, top sand 10,050 ft., T.D. 11,032 ft.
Pierce Junction, Harris County: Rio Bravo 18-B Settegast, 118 bbl., ¼-in. choke, T.D. 4,460 ft.
Port Neches, Orange County: Phillips 7 Stark, 125 bbl., ⅛-in. choke, T.D. 4,700 ft., plugged back T.D. 3,490 ft. Texas 13 Stark, 309 bbl., ¼-in. choke, T.D. 3,495 ft., plugged back T.D. 3,482 ft.
Red Fish Reef, Chambers County: Humble 22-A-247 State, 163 bbl., ⅛-in. choke, T.D. 8,710 ft.
Tomball, Harris County: Humble 5 Moody, gas well, perf. casing 5,490-96 ft. and 5,473-84 ft., T.D. 5,563 ft.
West Ranch, Jackson County: Magnolia 70-A West Ranch, 347 bbl., ¼-in. choke, T.D. 5,590 ft. Magnolia 74-A West Ranch, 136 bbl., ⅛-in. choke, perf. casing 5,760-65 ft., T.D. 6,175 ft. Magnolia 78-A West Ranch, 124 bbl., ⅛-in. choke, perf. casing 6,144-48 ft., T.D. 6,151 ft.

TEXAS GULF COAST DRILLING REPORT

Brazoria County: Rowan 13 Jameson, Danbury field, T.D. 5,622 ft., perf. casing 3,414-20 ft., flowing 5 bbl. fluid per hour, 92 per cent oil, 5 per cent wash water. Sterling 1 Shanks, J. Brown Sur., moving in material.
Colorado County: W. R. Davis 3-A Brownston, Salvo Salise Sur., Wilcox test, Garwood field, drilling shale 9,091 ft.
Fort Bend County: Jack Frazier et al 1 Mason &

Andrew, Briscoe John Foster Sur., drilling shale and shells 2,868 ft.
Harris County: Strake & McDannald 1 J. K. Oates, E. Simpson Sur., coring sandy shale 7,350 ft.
Jackson County: Salt Dome Oil Co. 1 Zapalac 1 V. Garcia Sur., rigged up and S.D.
W. S. Boyle et al 1 Sartain, P. Gallardo Sur., drilling shale and sand 1,635 ft.
Texas 1 Kolle, J. M. Crabb Sur., T.D. 4,860 ft., W.O.
Matagorda County: Barnsdall 1 Doman, P. Burnett Sur., building road.
Montgomery County: Atlantic 1 Foster Lumber Co., Pressly Gill Sur., drilling shale 8,548 ft.
H. C. Cockburn 1 Montgomery County School Land Sur., drilling shale 4,093 ft.
Continental 1 Foster estate, Jose M. de La Garza Sur., drilling shale and lime 7,190 ft.
Glenn McCarthy 1 Roscoe Sayle, J. Scott Sur., drilling shale 7,033 ft.
Superior 3 T. A. McWhorter, Lake Creek field, drilling sandy shale 9,824 ft.
Polk County: Gulf 48 Wing, deep test Segno field, T.D. 1,477 ft., W.O.
Pan American 1 Texas Long Leaf Lumber Co., rigging up.
Wharton County: Wynn Crosby Drilling Co. 1 Poole, A. J. Fry Sur., Lissie area, first report.

Louisiana Gulf Coast Fields

(Continued from Page 86)

Darrow, Ascension Parish: Humble 19 Gumbel, dry, T.D. 6,940 ft.
East Hackberry, Cameron Parish: Union Sulphur 49 Watkins, 12 bbl. oil plus 95 per cent salt water, pumping, T.D. 3,152 ft., P.B. 3,045 ft.
Fausse Point, Iberia Parish: Texas 9 State, 270 bbl., 10/64-in. choke, perf. casing 8,702-19 ft., T.D. 8,871 ft.
Jennings, Acadia Parish: Superior 9 Heywood, 183 bbl., 11/64-in. choke, perf. casing 6,792-6,822 ft., T.D. 6,930 ft.
Lakeside, Cameron Parish: Superior 1 Calcasieu National Bank, 43 bbl. distillate, 2,462,000 cu. ft. of gas, 18/64-in. choke, perf. casing 9,900-15 ft., T.D. 10,422 ft.
Sweet Lake, Cameron Parish: Pure 14 Stanolind fee, 120 bbl., ¼-in. choke, perf. casing 5,912-35 ft., T.D. 7,451 ft.
Ville Platte, Evangeline Parish: Continental 1 J. L. and J. E. Ludeau, 228 bbl., 12/64-in. choke, perf. casing 9,890-9,900 ft.
Continental 2 Tate, 378 bbl., 12/64-in. choke, perf. casing 10,147-62 ft., T.D. 10,192 ft.
Markley & Crosby 1 Soileau, dry, T.D. 10,313 ft.
Westwego, Jefferson Parish: Stanolind 1 Pitre, 101 bbl., 10/64-in. choke, T.D. 9,091 ft., P.B. T.D. 8,988 ft.

LOUISIANA GULF COAST DRILLING REPORT

Allen Parish: Frank Campbell 1 Bowles, 14-3s-6w, top Discorbis Yeguaensis 6,908 ft., Eponides Yeguaensis 7,038 ft., Cockfield 6,934 ft., T.D. 7,510 ft., shut down for fuel.
W. T. Burton 1 Calcasieu National Bank, 21-5s-3w, drilling shale 10,246 ft.
Avoyelles Parish: Joe Humphrey 1 Franzee, 6-3n-3e, coring salt water sand 6,149 ft.
Evangeline Parish: Pan American 1 Guillory, Pine Prairie field, drilling shale and lime 9,035 ft.
Iberia Parish: Texas 2 State, in Gulf of Mexico, Township 18s-8e, drilling shale and sand 7,907 ft.
La Fourche Parish: Gulf 7 State, 8-21s-21e, drilling shale 9,948 ft.
Rapides Parish: M. H. Marr (Chamblee & Pitts) 1 Lee Lumber Co., 6-5n-3e, old T.D. 5,010 ft., sidetracked at 600 ft., drilling ahead.
St. Landry Parish: Brewster-Bartle 1 Richard, 25-8s-3e, drilling sandy shale 6,290 ft.
St. Helena Parish: Humble 1 Great Southern Lumber Co., 20-1s-5e, drilling shale 1,025 ft.
Terrebonne Parish: Gulf 1 Emile Picou, 70-20s-18e, drilling shale 12,089 ft.
Vermilion Parish: Phillips 1 Fitzsimmons, Erath field, T.D. 12,035 ft., perf. casing 11,960-70 ft., flowed 270 bbl. distillate on drill-stem test, killed to reperforate in higher sand.

Michigan Fields

(Continued from Page 71)

Bay County

Kawkawlin Township: Gulf Refining Co. 1 Wendt, NW SW SW 34-15n-4e, pumping 125 bbl., acid, T.D. 2,936 ft.

Gratiot County

Newark Township: Darke Bros. 1 Gladstone wildcat. SW NW SW 6-10n-3w, dry, T.D. 3,288 ft.

Kalamazoo County

Oshtemo Township: Fisher-McCall Oil & Gas Co. 1 Borner, SW NW SE 3-2s-12w, wildcat, dry, T.D. 1,872 ft.

Kent County

Walker Township: Texagon Oil Co. 1 Whalen, NE SE SE 31-7n-12w, pumping 5 bbl., acid, T.D. 1,915 ft.

Montcalm County

Ferris Township: Belvidere Oil Co. 1 Crum & Babick, NW SW SE 17-11n-5w, wildcat, dry, T.D. 3,601 ft.

Oceana County

Crystal Township: Welsh Oil Co. 1 Bocks, SW NE SW 9-16n-16w, location abandoned.

Osceola County

Lincoln Township: Taggart Bros. Co. 22 Hoogerhide-Heilman, C NW 20-18n-10w, 11,500,000 cu. ft. natural gas, T.D. 1,233½ ft.
Gulf Refining Co. 4 Henry, C N½ SE NW Sec. 31, 3,600 bbl., natural, T.D. 3,622 ft.

Ottawa County

Tallmadge Township: Louis Rose 1 Antvelink, SW SW NW 27-7n-13w, pumping 18 bbl., acid, T.D. 1,895 ft.

Van Buren County

Bloomingdale Township: Clapsaddle & Harris 1 McLain, SW SW NE 3-1s-14w, dry, T.D. 1,351 ft.

Construction Company, who for the past several years has been successful in the laying of pipelines, and who owns the equipment necessary for the completion of large jobs, is now desirous of retiring from this business and disposing of the equipment, warehouse and machine shops, as well as the real estate upon which these are located. The principal items of which are as follows:

FORTY ACRES OF LAND.

One large sheet iron shop, completely equipped for all types of machinery repair. Also storage space for small tools.

One large sheet iron building for storage of trucks, cars, etc., and in which building there is a nicely equipped office.

One small building, in which is stored welding supplies; has dock for loading machinery attached and also 550-gallon underground storage gasoline tank, with pump attached.

All of buildings in large yard encased with high wire fence and well lighted with Jacobs windcharger system.

PRINCIPAL ITEMS OF PIPELINE EQUIPMENT ARE:

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The above described property is located in the Panhandle of Texas.
Construction Company in operation and machinery kept in good repair.

Direct all inquiries to

S. M. FINLEY, 510 Amarillo Bldg.,
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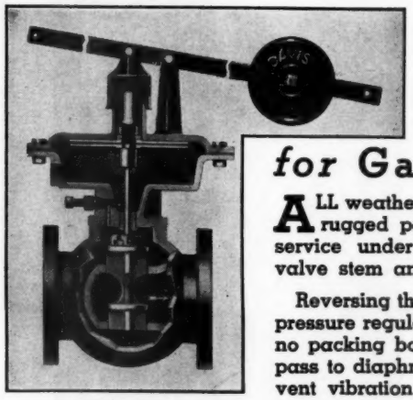

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Gas-Distillate Pay Showing South of Willow Springs

By R. MARNE SANFORD

DALLAS, Tex., Aug. 18.—According to information released by the operator, the Roger Lacy 1 Flanagan, Edwards Survey, is indicating a new gas-distillate area for southwestern Gregg County. The wildcat test is being drilled southwest of Longview and 4 miles south of the Willow Springs area. On a 30-minute drill-stem test from 7,235-7,502 ft. the well returned 360 ft. of gas-cut mud and no salt water.

The distillate-bearing sand is thought to be Travis Peak in age. If so, this would be a new pay for the county since the Willow Springs pool derives production from the Pettit lime. Mr. Lacy is reported planning a second drill-stem test.

Previously the operator reported plans to run a test on a 90-ft. section found from 7,300 to 7,399 ft. but evidently this test was not carried out. The report at the first of the week that the wildcat was slated for failure resulted from the showing of two electrical surveys, which indicated water and nothing more.

Whether or not the 1 Flanagan is a 4-mile extension to or on a separate structure from the Willow Springs pool is at the present time a controversial question. The answer may be had when full particulars on the test are released.

Two New Wildcats Staked

Wildcat activity in the district is beginning to slow down. Only two new locations were announced during the week. At the first of the summer as many as 14 new exploratory tests were reported in 1 week.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil: East Texas field	11	427	39,755
Other fields	4	1,051	18,539
Dry: Wildcats	5	.....	13,159
Total	20	.....	71,453

L. C. Moore, of Dallas, has finally completed title work and is ready to start immediate drilling at 1 G. C. Green. The prospective Woodbine test will be drilled on a 1,340-acre block in the J. W. Chandler Survey, in Wood County. Footage is given as 5,472 ft. from the south and 1,313 ft. from the east lines of the survey. This location is tentative. Spudding is scheduled for the first of the week.

In Anderson County, Roosth & Genecov have taken over 1 A. C. Saunders, on the east side of the Franksston townsite and in the Ferguson Survey. The test was officially abandoned last month after arousing considerable interest last winter with reports of pay possibilities.

The wildcat was drilled to 5,229 ft. by the R. H. & W. Oil Co. An electrical survey placed the top of the Austin chalk at 4,604 ft., top of the Woodbine sand at 5,060 ft. and the top of water sand at 5,135 ft. Operators are now cleaning out before testing.

Robertson and Cherokee County Wildcats Claim Attenton

A new shallow oil pool for Robertson County was being indicated at the end of the week at a wildcat test northwest of Calvert. The R. O. Pinkerton 1 W. C. Anderson logged sand showing oil at 1,365 to 1,371 ft. and on a 20-minute drill-stem test from 1,372-83 ft. recovered 20 ft. of oil and 20 ft. of mud, with no pressure.

Operators resumed drilling and went to 1,516 ft., total depth, before plugging back to 1,400 ft. to set casing and attempt completion in the sand. Location is 467 ft. from the south and east lines of Block 68, Pinkerton subdivision, J. Webb Survey, and on a 1,035-acre block near the Brazos River.

In Cherokee County, Bobby Manziel 1 Limber Log School, in the northern part of the county and in the Larissa-Bullard area, has set casing at 5,206 ft. Salt water from the Woodbine sand contained distillate but the concentration could not be ascertained because of the brine. An electrical survey on the hole from 5,206 ft. to 5,236 ft. showed 2,500 lb. of pressure.

EASTERN TEXAS COMPLETIONS

Wildcats

Angelina County: S. D. McDaniel 1 Bonner, Sarah Odel Sur., east of Huntington, dry at 1,225 ft.
Anderson County: A. J. Tyler 1 Dozier, C. J. Walters Sur., 1 mi. south Mabank, dry at 3,770 ft.
Navarro County: Topaz Oil 1-E Trammel, Wm. Bass Sur., 3½ mi. N Bazzette, dry at 3,213 ft.
Robertson County: Baker & Son 1 Middleton, J. S. McNeil Sur., 2 mi. S Elliott, dry and quit at 20 ft.
Wood County: M. P. Powell 1 Markey & Miller, H. H. Edwards Sur., 7 mi. N Hawkins, dry at 4,928 ft.

East Texas Field

(1-hr. gages)

Longview, Gregg County: T. S. Schroeder 9 Bumpas, 60 bbl., 3,531-80 ft.
Shell 32 Hampton, 48 bbl., 3,656-3,732 ft.
Stanolind 14-B Smith, 40 bbl., 3,507-26 ft.
Sun Oil 17 McKinley, 36 bbl., 3,614-66 ft.
Kilgore, Gregg County: Bay Oil 6 Godfrey, 58 bbl., 3,564-74 ft.
Magnolia 29 Griffin, 14 bbl., 3,542-3,605 ft.
Ed Pace 15 Elder, 20 bbl., 3,547-70 ft.
T. S. Schroeder 3 King, 60 bbl., 3,564-92 ft.
Texas Co. 14 Dickson, 45 bbl., 3,526-64 ft.
Joiner, Rusk County: J. L. Collins 13 Pinkston, 30 bbl., 3,626-36 ft.
Sun 12-B Schuler, 16 bbl., 3,682-3,710 ft.

Other Fields

Cayuga, Anderson County: Carter-Gragg 3 McMahon, 192 bbl., T.D. 4,011 ft.

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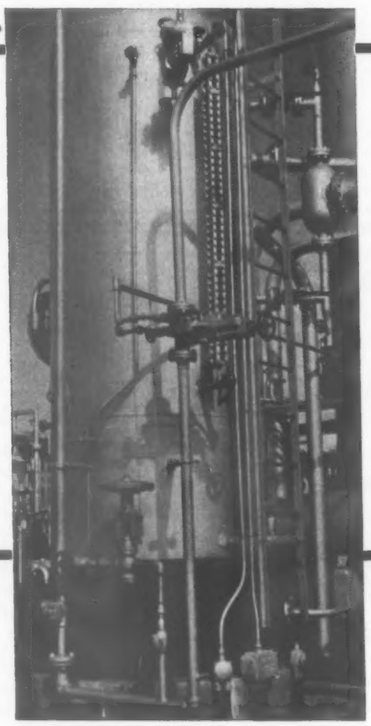

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In ordering give full details of service required.

JERGUSON GAGE & VALVE CO.

85 FELLSWAY SOMERVILLE, MASS.

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East Long Lake, Anderson County: Tex-Harvey Oil 4 Cartmel, 103 bbl., T.D. 5,417 ft.
Talco, Franklin County: Humble 30 Penn, 344 bbl., 4,230-83 ft.
Hawkins, Wood County: Humble 1 Allen, 412 bbl., 4,761-65 ft., T.D. 4,828 ft.

EAST TEXAS ACTIVE WILDCATS

Anderson County: Roosth & Genecov 1 Saunders, SW port, J. Ferguson Sur., old well drilling deeper, old T.D. 5,229 ft., rigging up.
Camp County: Talco Asphalt Co. 1 McKenzie, L. Williams Sur., ¾ mi. W of Pittsburg field, 7-in. casing at 7,947 ft., coring 8,016 ft.
Cherokee County: Bobby Manziel 1 Limber Log School, 4,100 ft. from S and 9,500 ft. from E lines John Vaughn Sur., 4 mi. SW of Bullard, casing at 5,050 ft., recovered water and mud on D.S. test.
Franklin County: W. B. Hinton 1 Hargrove, 467 ft. E and S NE cor. C. C. Dupree Sur., 8-in. casing at 203 ft., drilling 4,541 ft.
Gregg County: Roger Lacy 1 Flannigan, 9,450 ft. S and 1,555 ft. from W lines H. Edwards Sur., 8 mi. S Willow Springs, prepare to take D.S. test 7,491 ft.
Henderson County: British American Oil 1 Young, Joseph Rice Sur., 7½ mi. SW Athens, prepare to perf. casing 8,474 ft.
Lone Star 2 Allen, 3,490 ft. from W and 4,780 ft. S lines John Lawson Sur., 13⅜-in. casing at 190 ft., top Woodbine 4,343 ft., drilling 4,526 ft.
Houston County: T. C. Chism and G. L. Porter 1 P. D. Austin, Frank Johnson Sur., 1½ mi. SW Crockell, S.D. 3,605 ft.
Lamar County: Whitehead & Dahl 1 Barr, old well drilling deeper, 80 ft. N and 442 ft. W NE cor. I. Boren Sur., old T.D. 2,375 ft., drilling 2,870 ft.
Limestone County: B. F. Weekly A-2 Barron, 660 ft. out of NE cor. 320-ac. tract in E. Mabry Sur., 10-in. 200 ft., drilling 3,000 ft.
Robertson County: R. O. Pinkerton 1 Anderson, Jas. Webb Sur., 6 mi. NW Calvert, tested at 1,372-83 ft., dry, T.D. 1,516 ft., will P.B. to 1,400 ft.
Rusk County: G. C. Gasty 1 Kangarga Bros., 467 ft. from SE and 1,170 ft. from NE lines 100-ac. tract in T. Wood Sur., 8 mi. W and N of Laneville, top Woodbine 4,065 ft., 5½-in. 4,109 ft., S.D. 4,109 ft.
R. S. Kirby 1 Richardson, 467 ft. from N and E lines Blk. 5, J. I. Sanches Sur., waiting on cement at 200 ft.
Smith County: Sun Oil B-1 Sanders, 648 ft. from N and 1,000 ft. from W lines 81.53-ac. tract in Matthew Arnold Sur., 2 mi. SW of Chapel Hill, drilling 5,649 ft.
Upshur County: William Bradley 1 Robinson, 2,400 ft. from W and 5,075 ft. from N lines John Sanders Sur., 10-in. casing at 200 ft., prepare to abandon 4,600 ft.
Wood County: Roger Lacy 1 Snyder, old well drilling deeper, old T.D. 1,750 ft., 2,000 ft. from N and 300 ft. from E lines E. Castleberry Sur., 2½ mi. E Hawkins, drilling 4,300 ft.
Bobby Manziel 1 Barney Holmes, 834 ft. from S and 260 ft. from W lines T. L. Rusk Sur., 8¼-in. 225 ft., drilling 2,080 ft.
Fred Strang 1 Old, 467 ft. from S and 644 ft. from W lines 317-ac. tract in J. R. Smith Sur., S.D. 5,014 ft.

Kansas Fields

(Continued from Page 67)

Reno County: Hall-Jordan 1-A Stucky, N½ NW SW 31-25-5w, drilling 960 ft.
Continental 1 Johnson, SW NW NE 28-20-6w, drilling 210 ft.
Rocket 1 Shepherd, W½ NW NW 6-21-9w, anhydrite 310 ft., drilling 2,572 ft.

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Rooks County: T. H. Allan 1 Mitchell, N½ NE SE 10-10-19w, first report.
Russell County: Helmerich & Payne 1 Jennrich, W½ NW SE 13-12-15w, drilling 2,465 ft.
Phil-Han 1 Ney, NW SW SW 2-15-12w, anhydrite 587 ft., 10-in. 592 ft., drilling 1,520 ft.
Central 1 Hilgenberg B, S½ SE NE 18-15-12w, first report.
Scott County: Atlantic 1 Rosine, NE NE 34-19-33w, Mississippian 4,609 ft., T.D. 4,800 ft., electrical log.
Sedgwick County: W. S. Fees 1 Barthoiomew, N½ NE SW 30-27-4w, Viola 4,106 ft., cored fair saturation 4,111-14 ft., 5-in. 4,104 ft., standard tools.
National Refining 1 Thompson, SW SE NW 4-27-2e, 12-in. 1,474 ft., drilling 1,935 ft.
Stafford County: W. W. Drilling 1-A Wilson, N½ NW NW 5-25-14w, Viola 3,958-67 ft., bailed water and some show oil, acid, P.B. 3,965 ft., shot 3,960-65 ft., cleaning out.
Woodson County: W. R. Jenner et al 1 Hastings, E½ SE NW 24-26-13e, S.D. 1,250 ft.

Northeastern

Jefferson County: Lauring et al 1 Petrie, NE SE SE 19-10-20e, drilling 1,320 ft.
Leavenworth County: Max Cohen 1 Dacker, NW SW NE 12-8-20e, drilling 584 ft.
Sherrod 1 Carr, SW NE 13-10-20e, first report.

Oklahoma Fields

(Continued from Page 70)

Amerada 1 Nelson, NE NE NE 1-6-14w, first report, Viola lime test.
Love County: Magnolia 1 Wilson, SW SE NW 12-7s-2e, cored stained dry lime 4,529-30 ft., drilling 4,589 ft.
Batson 1 Walden, NE NW NW 34-6s-2e, T.D. 2,595 ft., cleaning out to shoot Viola 2,425-75 ft.
Stephens County: E. R. Perkins 1 State, NE NE NW 16-3s-8w, sand, show gas 854-92 ft., sand 2,588-2,610 ft., cored 2,610-26 ft., recovered dry sand and shale, drilling 2,870 ft.

North and Central

Creek County: Cole 1 Citizens Bank, NW NW SE 25-14-10, lowered 6-in. to 2,217 ft., drilling 2,246 ft.
Deep Rock 1 Lewis Meadvis, SE NW SE 16-15-7, drilling 1,206 ft.
Charles Balph 1 Starr, SE SE SW 7-15-8, Wilcox 3,792-3,800 ft., 5½-in. 3,750 ft., drilled plug, 3,400 ft. oil in hole, swabbed 103 bbl. in 12 hr., flowed 119 bbl. in 24 hr., T.D. 3,817 ft., shot 3,798-3,816 ft., flowed 50 bbl. in 9 hr., testing.
Grant County: Champlin 1-A Crouse, S½ SE SW 29-25-8w, Layton 4,980 ft., Checkerboard 5,270 ft., Cleveland 5,309 ft., Big lime 5,390 ft., Mississippian lime 5,845 ft., T.D. 5,876 ft., standard tools.
Texas Co. 1 Brenholt, E½ NW SW 36-25-3w, drilling surface hole.
Hughes County: Bailey 1 N. Williams, SW SW NE 14-9-10, sand 2,652-70 ft., 2,685-87 ft., est. 8,000,000 cu. ft. gas, drilling 2,687 ft.
Kay County: Deep Rock 1 Midgley, NW NW SE 33-28-4, Layton 2,400-34 ft., drilling 3,009 ft. in Skinner.
Ray Ostot 1 Ashbrook, NW NW SW 7-27-1w, first report.
Lincoln County: Allied Materials 1 Hicks, NW NW NW 25-13-6, first Wilcox 4,272 ft., second Wilcox 4,299 ft., cored white salty sand 4,306-12 ft., electrical log, 6-in. 4,306 ft., perf. 4,219-47 ft., acid, gaged 431,000 cu. ft. gas with some show oil, 1,575 lb. R.P., P.B. 4,076-4,129 ft. in Hunton, acid., gaged 7,000,000 cu. ft. gas, trace water, S.I.
Kemp 1 McLowry, SE SE SW 28-17-2, old well deepened, old T.D. 4,002 ft. in second Wilcox, 5½-in. 3,996 ft., perf. 3,550 ft., gaged 5,000,000 cu. ft. gas, 1,100 lb. R.P., to perf. again.
Dunnett 1 Dollison, NW SE NW 33-15-5, drilling 1,574 ft.
Mid-Continent 1 Evans Land, SW SE NW 31-14-6, 10-in. 193 ft., T.D. 213 ft.
Logan County: Roy Deihl 1 Lesh, NE NE NE 19-16-1w, Dewey 3,840 ft., Perry gas sand 3,960 ft., upper Layton 4,160 ft., Hogshooter 4,400 ft., Checkerboard 4,480-4,505 ft., drilling 4,638 ft.
Deep Rock 1 Murphy, NW NW SE 11-17-2w, T.D. 1,300 ft., crooked hole, P.B. 400 ft.
Harry Miller 1 Katschor, NE SW 7-16-2w, first report.
Noble County: Elm Oil 1 Hicks, SE SE SW 36-23-2w, Mississippian 4,870 ft., drilling 5,070 ft.
Okfuskee County: Shell 1 Palmer, SW NW SW 6-10-9, T.D. 4,215 ft., 4½-in. 4,185 ft., swabbed 13 bbl. water in 9 hr., P.B. 4,133 ft., swabbed and bailed dry, perf. in Hunton 4,005-10 ft., 1,000 ft. water in 2 hr., swabbed 33 bbl. water in 3 hr., squeezed 100 sacks, P.B. 3,958 ft., perf. 3,957-75 ft., swabbed 2 bbl. water with trace oil, perf. 3,946-58 ft., show gas, swabbed ¾ bbl. fluid, perf. 3,935-46 ft., 300 ft. fluid in hole, perf. 3,935-75 ft., swabbed 1 bbl. fluid an hr., acidized, swabbed 75 bbl. oil and 332 bbl. water, testing.
Shell 1 Heffner, SE NW NE 17-11-9, Booch 3,025 ft., Cromwell zone 3,380 ft., Cromwell sand 3,386-3,446 ft., show oil, drilling 3,476 ft.
W. C. McBride 1 Long, SE SE SW 17-12-10, Oswego 1,216 ft., Calvin 1,245 ft., Inola 2,278 ft., Bartlesville 2,300-2,510 ft., Booch 2,689 ft., Gilcrease zone 2,830 ft., Wapanucka 3,069 ft., Cromwell 3,085 ft., cored saturated sand 2,691-2,703 ft., cored lime, shale and sand 3,076-88 ft., cored saturated sand 3,088-99 ft., D.S. test 3,076-99 ft., est. 1,500,000 cu. ft. gas, drilling 3,099 ft.
Dave Malernee 1 Beard, SE SW NE 7-11-8, Booch 3,480 ft., Cromwell 3,695 ft., cored saturated sand 3,699-3,704 ft, and 3,704-10 ft., D.S. test 3,694-3,710 ft., show gas in 2 min., spray oil in 22 min., flowed est. 10 bbl. oil an hr., 7-in. 3,690 ft.
33-14-2w, Pawhuska lime 2,890 ft., Avant 4,300 ft., Bartlesville 5,819-44 ft., Hunton 5,870 ft., T.D. 6,132 ft. in Viola, electrical log, P.B. 5,870 ft. to test Bartlesville.
Osage County: Black Jack 1 Osage, NE NE SW 29-25-7, 6-in. 2,006 ft., drilling 2,070 ft.
Devonian 1-A Osage, SW SW NE 34-22-7, Oswego 2,270-2,305 ft., Prue 2,343-2,425 ft., show gas and water, drilling 2,432 ft.
Swartz 3-A Osage, SW SW NE 16-23-9, Bartlesville 2,156 ft., T.D. 2,170 ft., filled up 160 ft. with oil, natural, est. 6 bbl. natural, flowed 2½ bbl. oil by heads, then swabbed 12½ bbl. in 6 hr., shot 2,151-67 ft., cleaning out.
Ohio-Osage 1 Osage, E½ E½ NW 32-22-9, 8-in. 667 ft., 6-in. 1,990 ft., Bartlesville 2,238 ft., T.D. 2,250 ft. in sand, 4,250,000 cu. ft. gas, I.T.I.O. to take over and produce gas.
Payne County: Tomlinson 1 Williams, NE SE NW 4-19-2, drilling 1,420 ft.
Pontotoc County: Cason 1 Adcock, SE NW NE 21-4-6, sand 980-85 ft., some show oil, drilling 1,120 ft. in lime.
Mid-Continent 1 Wilson, SE SE NE 26-4-5, S.D. 1,532 ft.
Hughes-Thomas 1-A Johnson, SW SW SE 26-4-5, twin to 1 Johnson, dry hole, 8⅝-in. 42 ft., rigging up rotary.
Pottawatomie County: Stanolind-Amerada 1 Rowan, NE NW SW 20-9-4, Wilcox 5,014 ft., 5½-in. 4,836 ft., P.B. 4,749 ft., perf. 4,748-54 ft., acidized, couldn't lower 117-ft. water load below 3,000 ft., ran bailer to bottom, recovered salt water, ran 2-in. tubing with packer at 4,730 ft., swabbed 128 bbl. salt water in 8 hr., set packer at 4,731 ft., swabbed 1 gal. oil and 4 gal. water an hr., acidized, swabbed 20 bbl. salt water, S.D.
Seminole County: Moday Drilling 1 Whitney, NE NE SE 30-7-7, S.D. 2,004 ft.
Hall-Jordan 1 Jennings, N½ SE SE 8-8-8, first Wilcox 4,279 ft., 7-in. 4,285 ft., perf. 3,977-83 ft. in Hunton, acidized, 2½-in. tubing 3,971 ft., swabbed 100 bbl. oil and 50 bbl. water, S.I. for tanks.
Deep Rock 1 Work, NE NE NE 20-8-8, Booch 2,877-2,915 ft., cored stained sand 3,185-99 ft., Gilcrease 3,045-54 ft., Cromwell 3,196 ft., coring 3,199 ft.
Tate 1-B Fleets-Osborn, SE SW NE 11-6-7, Calvin 1,474 ft., T.D. 1,500 ft., shot 1,478-88 ft., no increase, swabbed 2 bbl. oil and 4 bbl. water an hr.
Stanolind-Amerada 1 J. F. Buck, NW SE NW 11-10-7, drilling 1,550 ft.
Barnsdall 1 Baker, NE SE NE 29-11-8, first report.

Kentucky Fields

(Continued from Page 68)

5324 Aaron Justice, lower Pompey Branch, 725 ft., sandy lime.
5326 W. H. Burchett, Missouri Branch, 550 ft., slate.
5331 J. W. Vicars, McComb Branch, 1,360 ft., slate and shells.

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ARMSTRONG BROS.

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5335 Mary Compton, Long Branch of Island Creek, 850 ft., salt sand.
5334 James W. Bevins, Sloane Branch, road complete.

Floyd County

Kentucky-West Virginia Gas Co. operations:
622 F. M. Rice, T.D. 2,550 ft.
630 J. W. Bates, T.D. 3,106 ft.
631 Lilly A. Runyon, 1,870 ft., slate.
634 Thomas Fitzpatrick, T.D. 2,819 ft., white slate.
636 Edmond Clark, 1,500 ft., lime.
637 Alex Martin, 1,589 ft., lime.
5301 James C. Jones, 2,086 ft., sand.
5310 Martha Alley, Frazier Creek, 3,000 ft., Berea.
5311 James Osborne, Osborne Branch, 1,900 ft., Big lime.
5327 James Stratton, 1,315 ft., sand.
5332 John W. Burchett, set machine.
5336 Preston Hamilton, Mitchell Fork of Mud Creek, idle.
5340 J. M. Porter, Thompson Fork of Souders Creek, 550 ft., slate.

Magoffin County

Inland Gas 1 T. B. Whitaker, Grassy Creek, T.D. 2,508 ft., white slate.
C. J. Sipple & Co., 11 W. M. Salyer, Birch Branch of Burning Fork, 800 ft., cased 790 ft.
Bed Rock Petroleum 6 R. L. Salyer, Birch Branch of Burning Fork, 950 ft., cased 890 ft.

Lee County

Rush Cable 1 E. S. Moore, Little Sinking, 650 ft.

WESTERN KENTUCKY

Butler County

Silver City district: Cumberland 7 Ora Brown heirs, 15 bbl., shot 40 qt., Jones sand, 381-405 ft.
Rochester district: A. M. Collins 4 Schrumm, drilling at 475 ft.

Daviess County

Pleasant Ridge district: Daugherty 6 W. A. Hewlett, 10 bbl., shot 20 qt., stray sand, 705-14 ft.
Daugherty 1 Morgan Ashley, drilling at 210 ft.
Hudson 1 C. L. Morgan, spudding in.
Utica district: Baldwin Oil Co. 4 A. A. Westerfield, drilling at 1,380 ft., old T.D. 1,187 ft., going to Bethel sand.

Hancock County

Floral district: Batton 3 H. Remington, spudding in.
Mecca Oil Co. 1 Robert Stevens, moving in.

Henderson County

Niagara district: Schneider & Gwin 4 O. W. Overfield, dry hole, T.D. 773 ft.
Schneider & Gwin 5 O. W. Overfield, 5 bbl., shot 20 qt., Niagara sand, 657-68 ft., T.D. 671 ft.
Stewart & Snyder 8 J. P. Cosby, spudding in.

Logan County

Diamond Springs district: H. A. Henry 3 Hattie Sneede, drilling at 350 ft.

McLean County

Southwest Livermore district: Ellis 7 Stevens heirs, flowing 20 bbl. per hr., natural, McClosky 1,628-33 ft.
Glenville district: Lohman & Johnson 2 D. Glenn & Crabtree, dry hole through McClosky, T.D. 1,727 ft.
Northwest Livermore district: Miller 1 W. E. Tanner, dry hole through McClosky, T.D. 1,860 ft.

Muhlenberg County

Belton district: Stewart 2 Goodall, moving in.
Dunmor district: Knight & Evans 1 E. T. Hunt, drilling at 330 ft.

Ohio County

Fordsville district: M. P. Evans et al 2 Luther Neal, dry hole, T.D. 275 ft.
Miller 7 John Whitler, rigging up.
Sunnydale district: Likens 6 Lee Lewis, drilling at 315 ft.
Pleasant Ridge district: Teller 1 Archie Moseley, drilling at 355 ft.

Union County

Boxville district: Toombs & Smith 1 W. B. Harris, spudding in.
Uniontown district: Dial & Menton 1 Betty Deacon, location.

CANADIAN FIELDS

Turner Valley North-Edge Well Flows 3,000-Bbl.

By VICTOR LAURISTON

CHATHAM, Ont., Aug. 18.—Crude and natural-gasoline production from Alberta in June totaled 802,323 bbl. compared with 827,102 bbl. in May. The daily average was 26,744 bbl. compared with 26,681 bbl. in May and 21,266 bbl. in June 1940.

Turner Valley production in June included: Shallow crude, 586 bbl.; naphtha, 1,464 bbl.; limestone crude, 773,132 bbl.; and natural gasoline, 19,182 bbl. There were 187 producing wells. Crude production from outside fields included: Red Coulee medium crude, seven wells, 1,015 bbl.; Wainwright heavy crude, five wells, 1,019 bbl.; Del Bonita light crude, one well, 172 bbl.; Dina-Ribstone heavy crude, two wells, 1,593 bbl.; Lloydminster heavy crude, one well, 63 bbl.; Steveville-Princess light crude, one well, 1,141 bbl.; Taber medium crude, one well, 1,334 bbl.; Vermilion heavy crude, four wells, 1,182 bbl. The largest Turner Valley producers in June were: Home Oil 1, with 18,703 bbl.; Home Oil 2, with 17,873 bbl., and Foothills Oil & Gas 5, with 17,255 bbl.

Natural-gas production for all Alberta fields in June totaled 4,518,486,000 cu. ft. The average of 150,636,000 cu. ft. daily was a decrease of 9,115,000 cu. ft. from May but an increase of 28,316,000 cu. ft. daily from June 1940. Turner Valley production was 4,085,508,000 cu. ft. of which 1,252,445,000 cu. ft. was disposed of commercially, with 2,833,063,000 cu. ft. waste. Production from other fields, practically all marketed, was: Viking-Kinsella, 163,555,000 cu. ft.; Medicine Hat-Redcliffe, 250,098,000 cu. ft.; other fields, 10,065,000 cu. ft.

Turner Valley gas treated in absorption plants in June amounted to 2,372,331,000 cu. ft. producing 18,182 bbl. of natural gasoline.

Crude-petroleum stocks in Alberta as of July 1 amounted to 369,061 bbl., a decrease of 33,283 bbl. from June 1, 1941, and 12,209 bbl. from July 1, 1940. Refined stocks as of June 1, 1941, amounted to 1,247,110 bbl., a decrease of 210,242 bbl. from May 1 and 44,007 bbl. from June 1, 1940.

Crude and natural-gasoline production from all Alberta fields for the week ending August 4 averaged 26,793 bbl. daily compared with 27,699 bbl. daily for the previous week and 27,541 bbl. daily for the corresponding week of 1940. The daily output included 25,858 bbl. of crude and 639 bbl. of natural gasoline from Turner Valley, 47 bbl. from the Steveville field, and 251 bbl. from other fields. The drilling summary showed 28 wells drilling, 1 finished, 2 on production, 7 testing, and 1 abandoned.

Turner Valley Lime Tests

North Turner Valley: Miracle Royalties 1, LSD 3, 4-21-3w5, total depth 8,010 ft., Madison 7,524 ft., flowed 503 bbl. natural in 24 hours. After acidizing with 1,000 gal. it flowed 1,000 bbl. in 8 hours, filling all available tankage. The most northerly producer, an exceptionally large well is indicated.

Royalite-Model 1, LSD 1, 22-20-3w5, below 7,049 ft., Madison at 7,013 ft.

North Central section: Empress Royalties 1, LSD 5, 2-20-3w5, total depth 8,787 ft., Madison 8,675 ft., abandoned. Location, east and south of Harris 2, recently abandoned, further delimits the central section of the field.

West Central section: Calmont-Northwest 4, LSD 2, 18-19-2w5, below 6,925 ft., Madison 6,833 ft.

Royalite Oil 57, LSD 2, 7-19-2w5, resuming, Madison 7,315 ft., 7-in. cemented 7,331 ft.

Argus Royalties 2, LSD 3, 25-19-3w5, Madison around 7,560 ft., cementing production string.

New Tests Starting

North Turner Valley: Major Oil Investments 7, LSD 7, 8-21-3w5, building road to site.

Major Oil Investments 8, LSD 13, 4-21-3w5, working on cellar.

Miracle Royalties 2, LSD 6, 4-21-3w5, offsetting Miracle 1 producer to the north, location.

Royalite Oil 62, LSD 3, 22-20-3w5, location, offsetting Royalite 43 producer to the west.

West Central section: Gem Royalties 1, LSD 4, 36-19-3w5, location, offsetting Argus Royalties 1 producer to the northwest.

Anglo-Canadian Oils 11, LSD 5, 25-19-3w5, location.

Outside Tests

Clearwater: Clear Oils 1, LSD 8, 2-35-10w5, total depth 3,007 ft., bailing and testing in Devonian.

Pouce Coupe: Guardian Oil 1, 7-80-12w6, total depth 6,800 ft., testing production.

Lethbridge: Lethbridge Petroleums 1, LSD 12, 11-8-22w4, deepened to 4,168 ft., Madison 4,145 ft. Bailing test in top of lime gave 2½ bbl. hourly, and deepening increased shows. Acidizing and testing after recementing.

Blood Indian Reserve: Northwest-Treaty 1, LSD 4, 17-8-23w4, total depth 6,043 ft., Madison 5,960 ft., acidizing and testing.

Steveville: Anaconda-Patricia 1, LSD 9, 31-20-12w4, 3,255 ft. with oil saturation in Sunburst, may deepen to Devonian before testing. Standard Oil 2 Princess, LSD 3, 13-20-12w4, swabbing to increase small production. Standard 3 Princess, LSD 5, 13-20-12w4, total depth 3,260 ft., flowing 47 bbl. daily with 20 bbl. water. McDougall-Segur Exploration 1, LSD 3, 11-20-12w4, rigging.

To Encourage Development

G. B. Webster assistant to the federal oil controller, recently arrived in Alberta to confer with N. E. Tanner, provincial minister of lands and mines, with regard to plans for encouraging oil development in the Canadian West. Dr G. S. Hume, head of the Geological Survey of Canada, who has headquarters at Calgary, assisted in the conferences. Efforts will be made to interest eastern capital in the testing of potential oil structures. Another project is the systematic development of the heavy-crude areas of eastern Alberta, where some production has already been secured in the Wainwright, Dina, Lloydminster, and Vermilion fields. This crude is desired for fuel oil, and it is believed that unitized pumping, together with the limited amount of processing required and the availability of gas for power, would make heavy-crude development economically feasible.

Gaspe Oil Project

Tentative arrangements have been made between the Quebec Mines Department and Imperial Oil, Ltd., for further drilling for oil in the Gaspe Peninsula. Numerous shallow tests many years ago developed a small production, and it is believed that more intelligent development would result in commercial fields. It is expected that drilling operations will start this year.

LEGAL

United States Department of the Interior, District Land Office, Las Cruces, New Mexico. Notice is hereby given that a lease of the oil and gas deposits in the following described lands is offered to the responsible qualified bidder of the highest bonus per acre, pursuant to the provisions of Section 17 of the act of February 25, 1920 (41 Stat. 437) as amended, at the royalty rate scale in the lease forms shown in General Land Office Circular 1386, at a sale to be held in the office of the Register of the District Land Office at Las Cruces, New Mexico, at 10:00 A.M. on October 1, 1941: E½ NE¼ Sec. 27, T. 17 S., R. 30 E., N.M.P.M., New Mexico, containing 80 acres in the Jackson Oil and Gas Field. The successful bidder must deposit on the date of sale a certified check on a solvent bank, or cash, of one-fourth of the amount of the bid and file a showing of qualifications to receive the lease, required by Section 7 of Circular 1386. The remaining three-fourths, together with the annual rental in advance at the rate of $1.00 per acre must be paid, and a $5,000 corporate surety bond must be furnished prior to the issuance of the lease. The bidders are warned against violation of the provisions of Section 59 of the Criminal Code, approved March 4, 1909, prohibiting unlawful combinations or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Register.

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MISSISSIPPI AND SOUTHEAST

Tinsley Operators Agree to Hold Down Production

By GEORGE WEBER

JACKSON, Miss., Aug. 18.—The Tinsley field, Mississippi's first and only major oil pool, produced at a record average daily rate of 49,010 bbl. last week, ranking it among the first seven fields in the nation from the standpoint of current withdrawal rates. The sharp increase in field production, first evident several weeks ago, was incited by increased outlets, particularly to the north in Illinois and Kentucky.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Tinsley....	5	2,625	24,724

Several meetings held among operators were followed by the announcement that a voluntary agreement to limit per-well production to 350 bbl. daily had been made, and reduction of the pool production is now in effect, with all but one operator conforming to the limit. No drastic cut is expected, however, for the field has 224 wells, and if operators produced the limit from each well, field production would exceed 75,000 bbl. daily. Many wells are producing well under the 350-bbl. limit.

Reports are again current of a proposed pipe-line outlet for the field, the only pool of its size in the nation without such an outlet. It is rumored, with no authentic foundation, the Standard Oil Co. of Ohio may lay a line to the Mississippi River to move oil for barge shipment to its refinery at Latonia, Ky. This is based on reports that the company is purchasing river barges. Movement may be by rail to Memphis, and thence to Latonia by river barge.

New Sand Opened At Tinsley

Union Producing Co. completed 2 Powell, north-edge test for 234 bbl. of fluid, last week to open a new basal Eutaw sand. The test is located north of 1 Powell, which last year opened first production in the Tuscaloosa formation. In the current test, the Selma, Stevens and Tuscaloosa sands which produce at Tinsley, showed no productive possibilities, and the new stray sand, located about 100 ft. below the Stevens group of the Eutaw formation, was found and tested at 5,761-86 ft. Casing was perforated at 5,771-85 ft. and the well was brought in on an 18/64-in. choke, making 20 per cent b.s. and 30 per cent salt water. The new sand is apparently not productive over a great area, for tests to the north and south of the new completion have not encountered it. However, it adds important testimony to the fact that many sands are productive at Tinsley, and that the field, with a major oil reserve in the Woodruff sand alone, shows potentially greater reserves in the several other sands which have not yet been sufficiently developed to indicate their true importance.

Sharkey Wildcat to Test With Pump

British American Oil Producing Co. 1-A Houston estate appears a probable new pool opener. The test, located in 23-11n-7w, 33 miles north of Vicksburg and 21 miles west of Tinsley, has been active since early March. Although oil production in limited quantity was realized from sand at 3,278-80 ft., the test has failed to date to make a commercial producer.

Operators have installed a pump, and are erecting storage at the test, and expect to make a production test shortly. The well was acidized with 1,200 gal., shot at 3,278-85 ft. and reacidized with 2,200 gal., and the oil fraction of the oil-salt water mixture is believed to have increased. It is not believed that the wildcat will make a large well, but if it is completed it will show importance in that it opens the third field in the state, and the first since Pickens, discovered in April, 1940.

MISSISSIPPI COMPLETIONS

Tinsley, Yazoo County: E. C. Johnston and Texas Co. 1 B. Hennis, NE NE SE 36-10-3, pumped 486 bbl., T.D. 5,070 ft., 5½-in. casing 5,068 ft., Woodruff zone 4,959-5,029 ft.

Magnolia 4 Mitch Payne, NW SW 36-10-3, 1,086 bbl., open 2½-in. tubing, T.P. 5 lb., C.P. 30 lb., T.D. 4,710 ft., 7-in. casing 4,678 ft., Woodruff zone 4,679-4,709 ft.

Sinclair 3 Sorrells, NW SW SW 29-10-2, pumped 684 bbl., T.D. 5,094 ft., 7-in. casing 5,092 ft., Woodruff zone 5,012-94 ft.

Union 4 Middleton, W½ SW NW 36-10-3, pumped 135 bbl., T.D. 4,780 ft., 7-in. casing 4,777 ft., Woodruff zone 4,700-44 ft.

MISSISSIPPI

Active Wildcats

Chickasaw County: Century 1-A Flaherty, S½ SW SW 8-13s-3e, fishing 2,000 ft.

Grenada County: H. T. Salter et al 1 Carpenter, NE SE 6-21n-7e, rigging up.

Kemper County: D. C. Williams et al 1 McKelvain, SE NE 2-9n-17e, drilling shale 2,003 ft.

Lawrence County: Tide Water Associated Oil Co. 1 Denman Lumber Co., N½ SW 5-5n-11e, moving in.

Leake County: Sinclair-Wyoming 1 Pearl River, NW SE NW 28-9n-6e, drilling 8,767 ft.

Marshall County: W. B. Fly 1 Tucker, NE NE 20-5s-4w, spudded 12 ft., S.D.

Sharkey County: British American 1-A Houston est., NW NE SW 23-11-7w, installed pump, erecting storage, T.D. 4,355 ft., P.B. 3,285 ft., perf. 3,278-80 ft., to test with pump.

Stone County: H. I. Morgan 1 University of Mississippi, C SE 35-3s-10w, set surface casing 120 ft., W.O.C.

Wilkinson County: Bering Oil Co. 1 Crosby Lumber Co., SW SW SW 15-4n-2w, moving in.

Yazoo County: Fred Endom 1 State School Land, NE NE NE 16-9n-3w, set surface casing 222 ft.

E. C. Johnston 1 John M. Gaddis, C E½ 26-10-1w, drilling 5,890 ft.

FLORIDA WILDCATS

Dade County: William G. Blanchard et al 1 Everglades, SW SW SW 31-53s-35e, drilling 2,660 ft. in Claiborne (Eocene).

William G. Blanchard 2 Everglades, SW SW 31-53s-35e, drilling 1,480 ft. in Claiborne.

ALABAMA WILDCATS

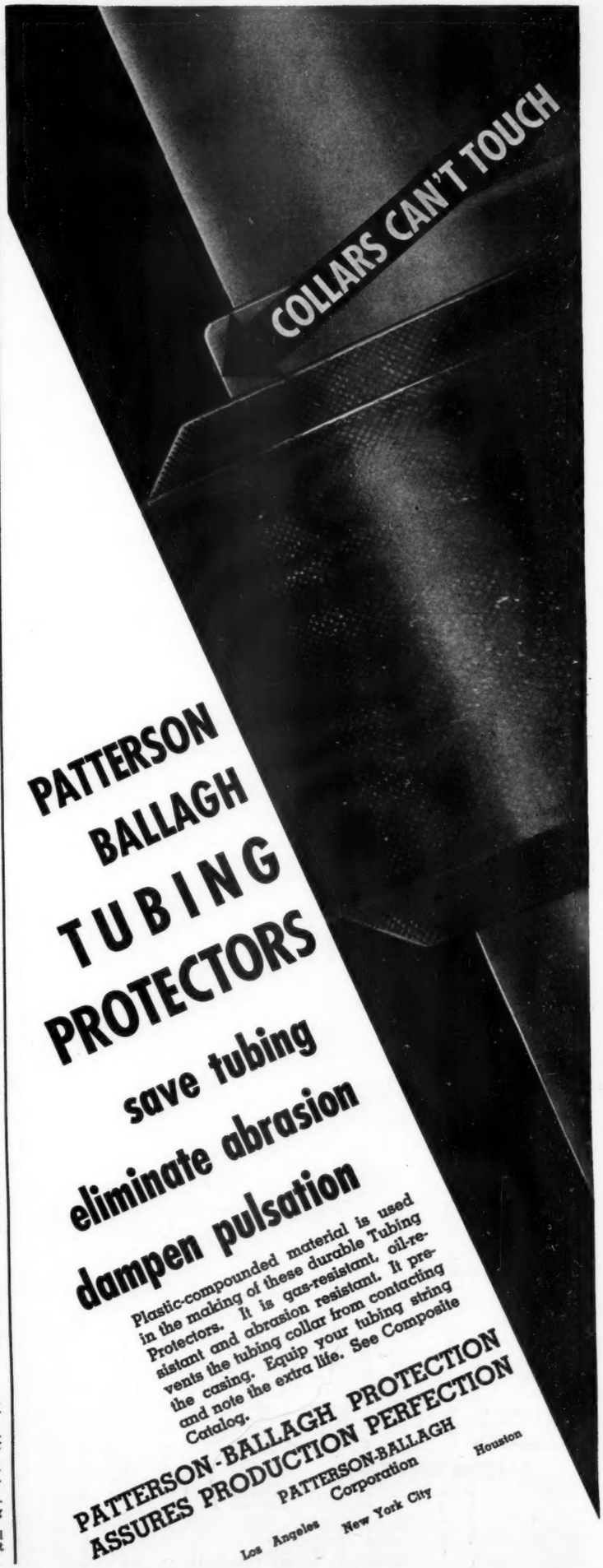
Clarke County: Union Producing Co. 1 M. M. Waite, C NW 27-8n-1w, drilling 9,911 ft.

Fayette County: J. W. Mills 1 W. C. Musgrove, C NW 10-15s-12w, drilling 997 ft.

Franklin County: E. O. Heath, Jr., 1 W. O. Hester, SW SW 4-6s-12w, S.D. 1,007 ft.

Lauderdale County: G. F. Mercer 1 Patterson, NW SE 8-2s-12w, drilling 1,052 ft.

Madison County: Frederic Mellen 1 Paul Thompson, NE NE NW 8-1s-1e, first report.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Summary of Operations, All Fields for July

SUMMARY OF COMPLETIONS

District—	Comp.	Oil	Prod.	Gas	Dry	Completions Under 1,000 ft.	1,000-2,500 ft.	2,500-5,000 ft.	5,000-10,000 ft.	Over 10,000 ft.	Footage	Drilling
Appalachian	624	482	626	119	23	7	580	29	8	0	1,060,176	744
Ohio	142	29	722	63	50	47	35	58	2	0	309,817	241
Indiana	63	35	4,565	6	22	16	22	25	0	0	126,962	78
E. Kentucky	52	12	62	36	4	4	19	29	0	0	114,144	96
W. Kentucky	33	14	956	0	19	18	15	0	0	0	31,290	41
Michigan	78	34	43,234	7	37	5	45	28	0	0	168,437	140
Illinois	389	281	58,405	2	106	19	189	181	0	0	930,386	358
Kansas	206	140	135,318	8	58	3	31	172	0	0	604,686	269
Nebraska	7	4	3,852	0	3	1	5	1	0	0	15,370	23
Missouri-Iowa	8	0	0	3	5	3	5	0	0	0	9,650	3
Oklahoma	195	121	31,623	14	60	27	69	74	25	0	591,618	381
North Texas	247	166	37,035	0	81	55	92	85	15	0	565,972	210
W. Central Texas	65	33	4,494	1	31	12	34	18	1	0	135,211	65
N. West Texas	148	140	106,716	0	8	0	10	49	89	0	711,072	136
S. West Texas	115	105	113,777	1	9	3	20	79	13	0	452,223	123
Texas Panhandle	83	77	13,625	2	4	0	4	79	0	0	255,970	88
East Texas	87	65	7,581	6	16	2	1	68	16	0	368,321	87
E. Texas Border	5	1	10	0	4	0	2	1	2	0	19,656	10
Upper Gulf Coast	80	66	12,853	0	14	0	2	8	62	8	530,403	151
Lower Gulf Coast	64	47	5,175	0	17	0	0	12	51	1	375,371	95
S. Central Texas	22	10	655	0	12	6	11	5	0	0	36,170	51
South Texas	62	36	4,346	4	22	3	14	42	3	0	212,304	84
Southeast New Mexico	41	31	5,503	1	9	4	9	28	0	0	127,927	88
Arkansas	17	8	1,701	1	8	1	4	8	4	0	65,324	7
North Louisiana	60	38	3,411	10	12	2	35	17	6	0	142,756	83
Louisiana Gulf	76	56	13,230	1	19	0	2	12	46	16	553,240	157
Mississippi	22	18	12,148	1	3	2	2	13	5	0	113,176	30
Alabama	0	0	0	0	0	0	0	0	0	0	.....	4
Georgia	1	0	0	0	1	0	1	0	0	0	1,501	0
Montana	28	15	2,644	5	8	0	12	15	1	0	66,882	83
Wyoming	19	17	5,320	0	2	1	5	8	5	0	64,074	83
Colorado	2	0	0	0	2	0	0	1	1	0	8,718	38
Utah	1	0	0	0	1	0	0	0	1	0	6,016	7
N. W. New Mexico	1	0	0	0	1	0	1	0	0	0	2,025	9
California	122	99	62,969	3	20	2	19	47	48	6	646,730	177
Total July	3,165	2,180	692,556	294	691	243	1,295	1,192	404	31	9,412,948	4,240
Total June	2,625	1,871	540,504	232	522	202	1,077	940	370	36	8,080,879	4,178
Difference	540	309	152,052	62	169	41	218	252	34	5	1,332,069	62

APPALACHIAN

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Bradford	314	*314	328	0	0	286
Allegany	128	†128	139	0	0	90
N. Oriskany	4	0	0	‡2	2	16
Middle dist.	24	20	23	¶3	1	10
Butler-Armstrong	7	5	6	‖1	1	20
S.W. Penna.	47	2	30	36	9	81
W. Virginia	100	13	109	77	10	241
Ttl. July	624	482	626	119	23	744
Ttl. June	553	465	593	71	17	715
Difference	71	17	33	48	6	29

*Includes 163 water-input wells.
†Includes 67 water-input wells.
‡17,600,000 cu. ft. gas.
¶121,000 cu. ft. gas.
‖60,000 cu. ft. gas.

OHIO

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Ashland	4	3	28	0	1	14
Ashtabula	1	0	0	0	1	0
Athens	17	5	5	9	3	17
Belmont	1	0	0	0	1	0
Coshocton	2	0	0	2	0	7
Cuyahoga	4	0	0	2	2	5
Fairfield	1	0	0	1	0	2
Gallia	2	0	0	1	1	2
Guernsey	5	0	0	2	3	3
Harrison	1	0	0	0	1	6
Hocking	1	0	0	0	1	2
Holmes	2	0	0	1	1	6
Knox	9	1	60	4	4	11
Lawrence	2	0	0	2	0	6
Licking	16	2	20	9	5	20
Medina	12	7	114	0	5	10
Meigs	8	0	0	5	3	14
Monroe	3	1	1	2	0	12
Muskingum	12	0	0	11	1	16
Noble	5	2	6	1	2	14
Perry	7	5	480	0	2	16
Stark	2	0	0	2	0	4
Summit	1	0	0	0	1	2
Tuscarawas	4	0	0	1	3	10
Washington	14	3	8	6	5	16
Wayne	3	0	0	1	2	8
Miscel.	3	0	0	1	2	15
Ttl. July	142	29	722	63	50	241
Ttl. June	153	47	976	60	46	237
Difference	11	18	254	3	4	4

INDIANA

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Bufkin	1	1	80	0	0	4
Cannelburg	2	2	23	0	0	1
East Calvin	9	9	1,759	0	0	5
Griffin and S.	20	17	2,462	0	3	23
Troy	2	1	5	0	1	1
Vanderburg	1	1	10	0	0	0
Veale	2	1	25	1	0	0
Wildcats	23	3	201	3	17	31
Miscel.	3	0	0	3	0	13
Ttl. July	63	35	4,565	6	22	78
Ttl. June	35	13	2,358	4	18	92
Difference	28	22	2,207	2	4	14

EASTERN KENTUCKY

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Magoffin	1	1	1	0	0	4
Laurel	0	0	0	0	0	1
Lee	2	2	9	0	0	2
Martin	7	1	5	5	1	8
Powell	4	4	28	0	0	2
Menifee	3	2	13	0	1	1
Floyd	12	1	1	10	1	21
Wolfe	1	1	5	0	0	0
Pike	12	0	0	12	0	31
Knott	7	0	0	7	0	19
Johnson	2	0	0	1	1	5
Knox	1	0	0	1	0	2
Ttl. July	52	12	62	36	4	96
Ttl. June	28	9	76	15	4	81
Difference	24	3	14	21	0	15

WESTERN KENTUCKY

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Butler	1	1	10	0	0	1
Daviess	9	3	535	0	6	11
Henderson	4	3	110	0	1	4
McLean	2	1	216	0	1	8
Ohio	11	6	85	0	5	9
Miscellaneous	6	0	0	0	6	8
Ttl. July	33	14	956	0	19	41
Ttl. June	33	17	738	2	14	51
Difference	0	3	218	2	5	10

MICHIGAN

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Allegan	13	8	415	1	5	17
Arenac	3	2	1,805	0	1	8
Bay	4	4	504	0	0	8
Cass	2	0	0	0	2	2
Clare	4	2	520	0	1	12
Gladwin	5	3	260	0	2	3
Isabella	6	1	214	5	0	7
Kalamazoo	1	0	0	0	1	1
Kent	1	0	0	0	1	3
Mecosta	1	0	0	0	1	2
Midland	1	0	0	0	1	2
Missaukee	2	0	0	1	1	0
Monroe	2	0	0	0	2	5
Montcalm	2	0	0	0	2	4
Oceana	1	0	0	0	1	1
Osceola	7	6	29,290	0	1	28
Ottawa	7	5	64	0	2	3
Roscommon	2	1	10,000	0	1	3
St. Clair	1	0	0	0	1	0
Shiawassee	1	0	0	0	1	2
Van Buren	12	2	162	0	10	7
Miscel.	0	0	0	0	0	22
Ttl. July	78	34	43,234	7	37	140
Ttl. June	60	23	3,701	5	32	137
Difference	18	11	39,533	2	5	3

ILLINOIS

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Albion	4	4	2,295	0	0	1
Allendale	9	5	351	0	3	9
Barnhill	1	0	0	0	1	2
Benton	42	42	11,321	0	0	24
Boos and N.	5	3	1,442	0	2	8
Bridgeport	2	2	0	0	2	0
Calvin and E.	14	11	1,161	0	3	11
Carmi	1	0	0	0	1	0
Clay City	5	5	564	0	0	4
Dahlgren	9	7	970	0	2	2
Dale D	17	17	7,137	0	0	15
Dix	3	2	190	0	1	0
Dundas	7	6	3,945	0	1	2
Dupo	3	3	208	0	0	3
Ellery	1	1	145	0	0	0
Enterprise, N. and W.	15	13	1,558	0	2	7
Flora, E.	1	0	0	0	1	0
Hoodville	5	5	1,299	0	0	8
Inman	18	13	1,539	0	5	4
Iola	1	1	25	0	0	0
Irvington	3	3	189	0	0	4
Johnsonville	2	2	673	0	0	14
Louden	27	21	2,098	0	6	28
Mason	2	2	164	0	0	2
Maud	1	1	25	0	0	0
Mt. Carmel	15	14	1,625	0	1	12
Noble and S.	1	0	0	0	1	1
New Haven	2	2	210	0	0	2
New Harmony and N.	35	34	4,140	0	1	25
Omaha	3	1	49	0	2	2
Patoka and E.	14	12	1,032	0	2	1
Phillipstown	1	1	90	0	0	0
Plymouth	3	1	2	0	2	1
Posey	2	1	430	0	1	0
Rising Sun	8	8	1,874	0	0	12
Roland	14	14	3,110	0	0	20
Russellville	1	0	0	1	0	0
Sailor Springs	4	3	902	0	1	4
St. James	3	3	157	0	0	1
Salem	1	1	44	0	0	7
S. Griffin	2	2	592	0	0	3
S. Lawrence	1	0	0	0	1	0
S. Herald	2	1	18	0	1	0
Storms	1	1	150	0	0	1
Walpole	1	1	170	0	0	1
W. Irons	1	1	104	0	0	3
W. Liberty	8	5	3,479	0	4	3
Wildcats	68	8	2,928	1	59	80
Miscel.	0	0	0	0	0	31
Ttl. July	389	281	58,405	2	106	358
Ttl. June	297	228	47,622	0	69	351
Difference	92	53	10,783	2	37	7

KANSAS

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Abbyville	1	1	381	0	0	1
Ahnert*	1	1	1,440	0	0	1
Albert	1	1	539	0	0	1
Atherton	1	1	750	0	0	0
Bradford	2	2	5,235	0	0	1
Bemis	3	3	4,415	0	0	5
Big Creek and S.	3	3	210	0	0	7
Bloomer	1	1	118	0	0	1
Breford	1	1	380	0	0	1
Burnett	12	9	21,019	0	3	7
Chase	5	5	5,485	0	0	8
Coralena	6	6	7,770	0	0	4
Couch	3	3	1,651	0	0	2
Cowley	1	1	50	0	0	0
Cunningham	4	3	396	1	0	3
Davidson	1	1	60	0	0	2
Emmeran	1	1	174	0	0	0
Fairfield	1	1	164	0	0	0
Fairport	1	1	137	0	0	1
Feltes	1	1	961	0	0	0
Frog Hollow	3	1	168	0	2	2
Geneseo	1	1	302	0	0	2
Gibson	1	1	315	0	0	1
Greenvale	5	4	928	0	1	1
Hall-Gurney	9	6	2,804	0	3	15
Higler	1	1	2,190	0	0	0
Hoffman	2	2	2,391	0	0	0
Iuka	1	0	2,391	0	0	0
Koblitz	1	1	550	0	0	1
Kraft	4	4	2,667	0	0	4
Lanterman	3	1	2,880	0	2	1
Laton	3	3	748	0	0	6
Lost Springs	4	3	1,118	0	1	3
Max	2	1	150	0	1	1
McLouth	10	4	120	6	0	6
Medicine Lodge	1	0	0	1	0	0
Pawnee Rock	4	4	3,292	0	0	4
Peace Creek*	1	1	3,000	0	0	1
Prusa and W.	3	3	6,030	0	0	5
Ray	4	4	5,514	0	0	3
Raymond	4	4	6,217	0	0	8
Rick	1	1	180	0	0	0
Rock	1	1	440	0	0	2
Roxbury	1	1	50	0	0	1
Rusch	3	3	3,758	0	0	2
Shaeffer	1	1	2,910	0	0	1
Silica and S. and W.	9	6	4,370	0	3	10
Stafford	4	3	6,531	0	1	0
Stoltenberg	5	5	6,497	0	0	2
Stratman	1	1	217	0	0	0
Trapp	13	9	11,266	0	4	7
W. Trapp	3	3	421	0	0	1
Voshell	1	1	90	0	0	0
Whelan	1	1	394	0	0	0
Zenith	5	5	5,320	0	0	8
Miscel.	21	4	135	0	17	75
Wildcats	19	0	0	0	19	50
Ttl. July	206	140	135,318	8	58	269
Ttl. June	176	139	154,499	1	36	294
Difference	30	1	19,181	7	22	25

*Discovery.

NEBRASKA

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Falls City	4	3	3,715	0	1	1
Shubert	1	1	137	0	0	5
Wildcats	2	0	0	0	2	14
Ttl. July	7	4	3,852	0	3	23
Ttl. June	8	2	2,620	0	6	21
Difference	1	2	1,232	0	3	2

OKLAHOMA

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Altus	2	0	0	0	2	3
Apache	0	0	0	0	0	4
W. Arno	2	1	186	1	0	1
N. Beebe	5	5	1,790	0	0	1
NE. Bethel*	2	1	185	1	0	2
Burbank	1	1	100	0	0	0
N. Castle*	1	1	147	0	0	1
Cement	6	5	3,460	1	0	10
Chickasha	1	0	0	1	0	3
Comanche	2	2	127	0	0	0
E. Cromwell	0	0	0	0	0	5
Cumberland	2	2	996	0	0	12
Dill	2	1	216	0	1	3
S. Dill*	1	1	494	0	0	1
W. Earlsboro	2	2	483	0	0	0
Fish	2	0	0	0	2	1
W. Fish	1	0	0	0	1	0
Guthrie	10	10	5,732	0	0	7
Healdton	3	3	71	0	0	1
W. Hewitt	11	11	4,489	0	0	6
Hill Top	1	0	0	0	1	0
Hobart	4	4	2,060	0	0	7
Hotulke and W.	2	2	186	0	0	10
N. Little River	1	0	0	0	1	1
Lovell	1	0	0	0	1	0
S. Maud	1	1	124	0	0	0
W. Maud	0	0	0	0	0	4
Navin*	1	1	80	0	0	0
Okemah dist.	3	2	170	1	0	2
Oklahoma City	3	3	1,173	0	0	15
Otoe*	1	1	205	0	0	2
St. Louis	7	6	1,666	0	1	6
N. St. Louis	1	1	765	0	0	1
E. St. Louis	0	0	0	0	0	4
E. Stroud	18	17	3,029	0	1	10
Tecumseh Lake	4	3	1,307	0	1	6
E. Tecumseh*	2	2	795	0	0	2
Velma (deep)*	1	1	132	0	0	0
Velma (shallow)	5	3	54	0	2	2
Miscellaneous:						
Carter	5	4	535	0	1	5
Creek	10	5	121	1	4	11
Hughes	2	1	16	0	1	3
Kay	1	1	85	0	0	4
Le Flore	1	0	0	1	0	0
Lincoln	2	1	55	0	1	2
Marshall	1	1	30	0	0	2
Muskogee	1	0	0	0	1	4
Okfuskee	2	0	0	0	1	8
Okmulgee	8	0	0	3	5	17
Osage	9	6	273	0	3	23
Pawnee	3	2	30	0	1	5
Pittsburgh	3	0	0	2	1	1
Pontotoc	2	1	10	0	1	2
Pottawatomie	1	0	0	0	1	12
Seminole	4	3	212	0	1	15
Stephens	1	1	6	0	0	10
Tulsa	1	1	25	0	0	14
Wagoner	5	1	3	1	3	15
Other	0	0	0	0	0	12
Wildcats	21	0	0	0	21	83
Ttl. July	195	121	31,623	14	60	381
†Ttl. June	173	111	22,592	11	51	326
Difference	22	10	9,031	3	9	55

*Discovery. †Revised.

NORTH CENTRAL TEXAS

NORTH TEXAS

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Allee	1	0	0	0	1	0
Antelope	2	2	1,050	0	0	3
Bowers	2	1	120	0	1	1
Bryson	7	7	1,485	0	0	4
Coleman (Clay)	1	1	8,520	0	0	1
Coleman (Archer)	2	2	1,126	0	0	1

	Comp.	Oil	Prod.	Gas	Dry	Dig.
Fargo	6	6	2,679	0	0	6
Hott	1	1	47	0	0	1
Hull-Silk	10	8	1,368	0	2	10
Harrold	1	1	175	0	0	1
Hults-Owens	1	1	30	0	0	1
Kadane	2	2	365	0	0	1
K.M.A. and Deep	36	36	12,437	0	0	23
Larrimore	3	3	638	0	0	3
Nocona	4	3	62	0	1	2
Olney	25	7	173	0	18	19
Rogers & Rogers	1	1	100	0	0	1
Seymour	1	1	288	0	0	1
Voth	8	7	167	0	1	6
Walnut Bend	4	2	385	0	2	3
Wildcats	27	6	977	0	21	37
Unlisted fields	0	0	0	0	0	17
Misc. fields:						
Archer	18	12	512	0	6	13
Clay	30	18	1,393	0	12	22
Cooke	8	8	133	0	0	4
Throckmorton	3	1	10	0	2	2
Wichita	28	18	910	0	10	19
Wilbarger	7	5	265	0	2	3
Jack	3	2	203	0	1	2
Young	5	4	1,417	0	1	3
Subtotal	247	166	37,035	0	81	210

WEST CENTRAL TEXAS

Akard	2	2	325	0	0	1
Albany	1	1	4	0	0	1
Avoca	3	2	433	0	1	1
Brownwood gas	1	0	0	1	0	1
Bluff Creek	4	3	165	0	1	2
Carbon	1	1	250	0	0	1
Cisco	1	1	91	0	0	1
Cook	2	2	202	0	0	1
Cross Cut	1	1	8	0	0	1
Echo	1	1	225	0	0	1
Hamby	1	1	40	0	0	1
Harris	1	1	72	0	0	0
Lewis	4	3	488	0	1	2
Novice	3	3	307	0	0	2
Noodle	2	2	996	0	0	2
Sewalt	1	1	6	0	0	1
Wimberly	1	1	296	0	0	1
Wildcats	27	6	492	0	21	22
Unlisted fields	4	0	0	0	4	15
Misc. fields:						
Eastland	1	0	0	0	1	2
Jones	1	0	0	0	1	2
Shackelford	2	1	94	0	1	3
Subtotal	65	33	4,494	1	31	65
Ttl. July	312	199	41,529	1	112	275
Ttl. June	208	129	19,904	4	75	271
Difference	104	70	21,625	3	37	4

WEST TEXAS

NORTHERN WEST TEXAS

Andrews	1	1	110	0	0	1
Chalk	1	1	878	0	0	0
Cedar Lake	3	3	2,039	0	0	2
Dockery-Robbins	7	6	1,160	0	1	4
Emma	1	1	1,408	0	0	1
Means	2	2	157	0	0	1
North Cowden	1	1	482	0	0	2
Seminole	6	6	3,459	0	0	4
Sharon	4	4	571	0	0	3
Slaughter	76	76	76,072	0	0	66
Snyder	4	4	629	0	0	2
Wasson	35	35	19,751	0	0	29
Wildcats	7	0	0	0	7	11
Miscellaneous	0	0	0	0	0	10
Subtotal	148	140	106,716	0	8	136

SOUTHERN WEST TEXAS

Apco	1	1	1,469	0	0	0
Abell	9	8	11,293	1	0	8
Church-Fields	1	1	38	0	0	1
Conry	1	1	109	0	0	1
Estes	7	7	5,603	0	0	6
Foster	5	5	2,133	0	0	4
Goldsmith and N.	6	5	5,558	0	1	4
Halley	2	2	656	0	0	0
Hayes Gas	2	0	0	0	2	0
Hendrick	2	2	315	0	0	1
Hoover	1	1	29	0	0	0
Hutchins	3	3	1,068	0	0	2
Johnson	12	12	16,249	0	0	10
Jordan	4	4	13,158	0	0	3
Keystone	11	11	15,758	0	0	9
McCamey	3	3	779	0	0	2
McElroy	5	5	784	0	0	4
North Cowden	12	12	12,769	0	0	9
Noelke	3	1	2,928	0	2	4
Payton	2	1	403	0	1	2
Pecos Valley	3	2	79	0	1	3
Sealy	1	1	97	0	0	1
Sand Hills	3	3	14,972	0	0	4
Taylor-Link	1	1	1,054	0	0	1
Tobarg	3	3	92	0	0	4
Waddell	2	1	5,400	0	1	2
World	3	3	437	0	0	0
White & Baker	5	5	322	0	0	4
Wildcats	2	1	225	0	1	16
Miscellaneous	0	0	0	0	0	18
Subtotal	115	105	113,777	1	9	123
Ttl. July	263	245	220,493	1	17	259
Ttl. June	178	171	130,916	1	6	291
Difference	85	74	89,577	0	11	32

TEXAS PANHANDLE

Carson	4	4	257	0	0	10
Gray	36	36	5,496	0	0	29
Hemphill	1	0	0	0	1	0
Hutchinson	35	34	7,642	0	1	37
Potter	1	0	0	0	1	0
Moore	2	0	0	2	0	4
Wheeler	4	3	230	0	1	8
Ttl. July	83	77	13,625	2	4	88
Ttl. June	41	40	7,645	1	0	96
Difference	42	37	5,980	1	4	8

EASTERN TEXAS

East Texas	43	†40	1,693	0	3	26
Angus	1	0	0	0	1	0
Cayuga	2	0	0	2	0	1
Chapel Hill	2	1	179	1	0	2
Hawkins	13	13	3,947	0	0	14
Long Lake	3	1	68	1	1	1
Long Lake, East	2	1	114	0	1	1
Mexia	1	1	70	0	0	1
Opelika	1	0	0	1	0	1
Talco	3	3	834	0	0	2
Van	1	1	375	0	0	1
Wortham	2	2	26	0	0	2
Willow Springs	1	0	0	1	0	2
Wildcats*	12	2	275	0	10	18
Miscellaneous	0	0	0	0	0	15
Ttl. July	87	65	7,581	6	16	87
Ttl. June	87	63	7,967	2	22	97
Difference	0	2	368	4	6	10

*Pleasant Grove discovery, Rusk County, Willow Springs Oil Level, Gregg County. †Barrels an hour.

EAST TEXAS BORDER

Caddo	1	1	10	0	0	0
Smithland	1	0	0	0	1	2
Bethany	0	0	0	0	0	1
Wildcats	3	0	0	0	3	7
Ttl. July	5	1	10	0	4	10
Ttl. June	1	0	0	0	1	9
Difference	4	1	10	0	3	1

TEXAS GULF COAST

Anahuac	2	2	1,133	0	0	2
Blessing	1	1	136	0	0	1
Blue Ridge	1	1	231	0	0	1
Caplan	1	1	232	0	0	2
Cordele	2	2	94	0	0	1
Dyersdale	2	2	422	0	0	3
Esperson	1	1	178	0	0	3
Fannett	2	1	188	0	1	2
Garwood	1	1	238	0	0	3
Hardin	1	1	165	0	0	2
Hillje	2	2	118	0	0	1
Hull	2	2	553	0	0	4
Humble	1	1	30	0	0	1
Lake Creek	1	1	197	0	0	1
Lolita	8	8	1,297	0	0	9
Lockridge	1	1	108	0	0	0
Lovells Lake	1	1	130	0	0	2
Lucky	1	1	0	0	1	0
Manvel	1	1	36	0	0	1
Maurbro	3	3	847	0	0	4
Old Ocean	4	4	1,554	0	0	11
Orange	1	1	132	0	0	1
Port Neches	1	1	192	0	0	3
Red Fish Reef	1	1	144	0	0	2
Saratoga	1	1	72	0	0	1
Segno	1	1	360	0	0	2
Thompson	1	1	158	0	0	1
Tomball	2	2	555	0	0	1
Van Vleck	1	1	138	0	0	1
West Ganado	3	3	129	0	0	2
West Columbia	2	2	691	0	0	4
West Beaumont	1	1	108	0	0	1
West Ranch	11	11	2,038	0	0	12
Withers	3	3	249	0	0	3
Miscellaneous	12	0	0	0	12	63
Ttl. July	80	66	12,853	0	14	151
Ttl. June	96	76	17,461	1	19	125
Difference	16	10	4,608	1	5	26

SOUTH CENTRAL TEXAS

Bee Creek	1	1	268	0	0	1
Chicon Lake	2	1	7	0	1	0
Elm Creek	2	2	14	0	0	1
Gas Ridge	2	2	3	0	0	5
Lentz	1	1	248	0	0	1
Luling	1	1	20	0	0	0
Tenney Creek	2	2	95	0	0	1
Miscellaneous	11	0	0	0	11	42
Ttl. July	22	10	655	0	12	51
Ttl. June	17	11	980	1	5	49
Difference	5	1	325	1	7	2

LOWER GULF COAST

Agua Dulce	7	7	1,645	0	0	12
Ben Bolt	1	1	331	0	0	3
Clara Driscoll	1	1	66	0	0	2
Bloomington	1	1	65	0	0	0
Coleto Creek	1	1	40	0	0	2
East Flour Bluff	1	1	66	0	0	2
East Alice	2	1	48	0	1	0
East Premont	3	3	364	0	0	3
East Placedo	1	1	22	0	0	1
East White Point	1	1	109	0	0	1
Fagan	2	2	163	0	0	3
La Gloria	1	1	137	0	0	3
Midway	5	4	273	0	1	5
Minnie Bock	4	4	299	0	0	4
Odem	1	1	52	0	0	2
Orange	2	1	86	0	1	0
Pettus	1	1	99	0	0	0
Premont	1	1	50	0	0	0
Richard King	2	2	143	0	0	2
Plymouth	1	1	130	0	0	1
Refugio	2	2	134	0	0	3
Saxet	1	1	60	0	0	3
South Clara Driscoll	3	1	54	0	2	3
Stratton	2	2	234	0	0	8
Wade City	1	1	99	0	0	2
West Alfred	2	1	162	0	1	0
West Chapman	1	1	162	0	0	1
Woodsboro	2	2	80	0	0	1
Miscellaneous	11	0	0	0	11	28
Ttl. July	64	47	5,175	0	17	95
Ttl. June	58	36	5,785	2	20	99
Difference	6	11	610	2	3	4

SOUTH TEXAS

Argo	1	1	96	0	0	0
Boyle	1	1	57	0	0	3
Alta Mesa	1	1	199	0	0	2
Casa Blanca	1	1	37	0	0	2
Charamousca	1	1	300	0	0	1
Colorado	2	2	263	0	0	2
Government Wells	1	1	66	0	0	2
Hoffman	3	0	0	0	3	1
Holbein	1	1	20	0	0	1
Kelsey	2	2	816	0	0	2
Killam	5	5	256	0	0	3
Lopena	1	0	0	1	0	3
Lundell	2	0	0	2	0	2
Manila	2	1	50	1	0	1
Oakville	1	1	30	0	0	2
Piedra De-Lumbre	1	1	109	0	0	0
Rincon	13	10	1,520	0	3	12
Sam Fordyce	2	2	105	0	0	1
Sun	7	4	407	0	3	4
White Creek	2	1	24	0	1	1
Miscellaneous	12	0	0	0	12	39
Ttl. July	62	36	4,346	4	22	84
Ttl. June	65	36	3,988	5	24	70
Difference	3	0	358	1	2	14

ARKANSAS

Dorcheat	1	1	384	0	0	4
El Dorado	2	1	16	0	1	0
Macedonia	1	0	†340	*1	0	0
McKamie	1	1	384	0	0	4
Smackover	3	0	0	0	3	1
Troy	3	2	91	0	1	3
Urbana	3	3	486	0	0	1
Miscellaneous	1	0	0	0	1	4
Wildcats	2	0	0	0	2	7
Ttl. July	17	8	1,701	1	8	24
Ttl. June	33	20	2,570	1	12	23
Difference	16	12	869	0	4	1

*Gas production (million cu. ft.): Macedonia 3.75. †Condensate production.

NORTH LOUISIANA

Bellevue	4	3	38	0	1	2
Bisteneau	1	0	0	1	0	0
Caddo	14	10	560	0	4	22
Georgetown-Urania	3	2	100	0	1	0
Little Creek	5	5	670	0	0	3
Monroe	6	0	0	6	0	4
Nebo	4	3	340	0	1	7
Olla	10	9	1,218	1	0	8
Pleasant Hill	1	1	12	0	0	0
Sligo	4	3	255	1	0	3
South Olla	3	1	40	0	2	1
Sugar Creek	1	0	0	1	0	4
Walters	1	1	178	0	0	1
Miscellaneous	3	0	0	0	3	7
Wildcats	0	0	0	0	0	20
Ttl. July	60	38	3,411	10	12	83
Ttl. June	66	40	3,857	10	16	70
Difference	6	2	446	0	4	13

Gas production (million cu. ft.): Bisteneau 41.8, Monroe 11.775, Olla 8, Sligo 85, Sugar Creek 20.

LOUISIANA GULF COAST

Abbeville	1	1	57	0	0	0
Anse La Butte	9	5	754	0	4	7
Barataria	1	1	300	0	0	4
Bayou Blue	3	2	233	0	1	5
Bayou Pigeon	1	1	322	0	0	1
Bayou Choctaw	1	1	444	0	0	2
Cameron Meadows	1	1	150	6	0	2
Charenton	1	1	95	0	0	2
East Hackberry	2	1	20	0	1	5
Gillis	1	1	142	0	0	1
Golden Meadow	4	2	361	0	2	6
Grand Bay	2	2	745	0	0	0
Gueydan	1	1	218	0	0	5
Iowa	2	2	399	0	0	2
Jennings	1	1	337	0	0	3
Lafitte	1	1	149	0	0	1
Leesville	1	1	568	0	0	1
Lake Salvador	1	1	541	0	0	1
Neale	1	1	431	0	0	2
Paradis	1	1	875	0	0	2
Pine Prairie	3	3	1,273	0	0	3
Potash	1	1	389	0	0	1
Port Allen	1	1	192	0	0	0
Richie	2	1	96	0	1	0
Section 28	1	1	291	0	0	1
St. Gabriel	2	2	383	0	0	2
South Crowley	1	0	0	1	0	1
Sulphur	3	3	250	0	0	2
Tepetate	1	1	192	0	0	0
Venice	1	1	204	0	0	2
Ville Platte	8	8	2,095	0	0	16
Vinton	1	1	153	0	0	1
West Bay	2	2	415	0	0	2
West Cote Blanche	1	1	46	0	0	1
West Hackberry	1	1	54	0	0	2
Woodlawn	1	1	56	0	0	4
Miscellaneous	10	0	0	0	10	67
Ttl. July	76	56	13,230	1	19	157
Ttl. June	97	65	16,188	1	31	145
Difference	21	9	2,958	0	12	12

MISSISSIPPI

Jackson	1	0	0	1	0	1
Tinsley	18	18	12,148	0	0	21
Wildcats	3	0	0	0	3	8
Ttl. July	22	18	12,148	1	3	30
Ttl. June	27	21	15,211	0	6	23
Difference	5	3	3,063	1	3	7

Gas production (million cu. ft.): Jackson 20.

MONTANA

Bowdoin	3	0	0	3	0	18
Cut Bank	15	13	2,631	0	2	15
Dunkirk	1	0	0	0	1	0
Kevin-Sunburst	7	2	13	1	4	18
Mosby	1	0	0	0	1	0
Whitlash	1	0	0	1	0	0
Miscellaneous	0	0	0	0	0	32
Ttl. July	28	15	2,644	5	8	83
Ttl. June	21	7	413	8	6	71
Difference	7	8	2,231	3	2	12

WYOMING

Cole Creek	1	1	90	0	0	1
East Mahoney	1	1	135	0	0	0
Horse Creek	1	0	0	0	1	1
La Barge	3	3	244	0	0	5
Lance Creek	3	3	3,060	0	0	6
Lost Soldier	1	1	400	0	0	2
Oregon Basin	2	2	520	0	0	2
Osage	3	3	46	0	0	6
Rocky Point	1	0	0	0	1	0
Salt Creek	2	2	310	0	0	0
Wertz	1	1	515	0	0	3
Miscellaneous	0	0	0	0	0	57
Ttl. July	19	17	5,320	0	2	83
Ttl. June	8	7	2,068	0	1	81
Difference	1	10	3,252	0	1	2

COLORADO

Moffat	1	0	0	0	1	6
Routt	1	0	0	0	1	1
Miscellaneous	0	0	0	0	0	31
Ttl. July	2	0	0	0	2	38
Ttl. June	2	2	246	0	0	38
Difference	0	2	246	0	2	0

UTAH

Clay Basin	1	0	0	1	0	0
Miscellaneous	0	0	0	0	0	7
Ttl. July	1	0	0	1	0	7
Ttl. June	0	0	0	0	0	8
Difference	1	0	0	1	0	1

NORTHWEST NEW MEXICO

Fulcher Basin	1	0	0	1	0	2
Miscellaneous	0	0	0	0	0	7
Ttl. July	1	0	0	1	0	9
Ttl. June	3	0	0	0	3	13
Difference	2	0	0	1	3	4

CALIFORNIA

Belridge, N.	1	1	65	0	0	3
Brea Olinda	1	1	4	0	0	0
Coalinga	3	3	5,970	0	0	9
Coles Levee	1	1	1,128	0	0	4
Coyote, East	1	1	560	0	0	1
Coyote, West	1	1	553	0	0	1
Dominguez	12	10	3,750	0	2	6
Fruitvale	0	0	0	0	0	2
Greeley	1	1	696	0	0	6
Huntington Beach	4	4	1,493	0	0	3
Inglewood	5	4	6,869	0	1	5
Kern River	2	2	160	0	0	4
Kettleman N. Dome	3	3	415	0	0	8
Long Beach	4	3	451	0	1	5
McKittrick	3	3	410	0	0	1
Midway-Sunset	2	2	80	0	0	4
Mount Poso	6	6	1,492	0	0	2
Raisin City	1	1	736	0	0	0
Rincon	1	1	150	0	0	2
Rio Bravo	2	2	2,859	0	0	2
Rio Vista	3	0	0	3	0	3
Rosecrans	1	1	121	0	0	1
Round Mountain	2	2	294	0	0	2
Santa Barbara	1	0	0	0	1	0
Santa Fe Springs	1	1	90	0	0	0
Santa Maria Valley	8	8	8,075	0	0	3
Ten Section	3	3	4,630	0	0	2
Torrance	1	1	90	0	0	2
Tupman	2	2	1,669	0	0	3
Ventura Ave.	7	7	7,768	0	0	9
Ventura-Newhall	10	9	5,780	0	1	19
Whittier	1	1	100	0	0	0
Wilmington	14	14	6,511	0	0	15
Miscellaneous	0	0	0	0	0	16
Wildcats	14	0	0	0	14	36
Ttl. July	122	99	62,969	3	20	177
Ttl. June	117	100	71,660	4	13	177
Difference	5	1	8,691	1	7	0

Personal Paragraphs

ROBERT M. HARRIS, independent California operator and president of Brighton Oil Co., is returning to the Long Beach field and may participate in the new drilling under way in that area.

D. M. MURRAY, M. L. THORNE, and B. N. GRUMWOLD, all of Los Angeles, Calif., have filed articles of incorporation with California's secretary of state for the formation of a new firm to be known as Camay Oil Co. of Los Angeles. Capitalization was given as $1,000,000 by the three directors.

GROVER CROSBIE has arrived in Petrolia, Ont., from Peru, where he is on the staff of the International Petroleum Co.

E. C. PAGE, formerly an engineering and geologic consultant of Los Angeles, Calif., has started operation of a core-analysis laboratory at Ventura, Calif.

S. L. ROSE, geologist for Standard Oil Co. of California, and CHARLES J. CURTIS, have returned to Tulsa after a period of foreign service. Mr. Curtis, a refinery worker, has returned to work for the Texas Co.

JAMES McINTYRE, Tulsa, who retired as consulting editor of The Oil and Gas Journal last year, and his brother, EDWARD McINTYRE, of Dallas, Tex., have been visiting friends and relatives at their former home town of Bradford, Pa.

W. T. MITCHELL, of Lion Oil Refining Co., El Dorado, Ark., was recently transferred to the general service department in El Dorado, after an absence of 7 years, during which time he served as West Texas warehouse man at Wink.

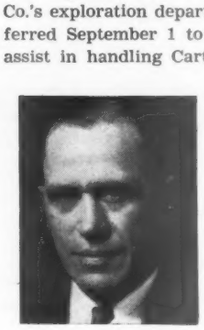
A charter has been issued to the Mimosa Corp. of Midland, Tex., by the secretary of the state. The oil firm has as incorporators, C. JOHNSON, E. RUSSELL LLOYD and O. E. CLENDENEN. Mr. Lloyd and Mr. Clendenen are Midland geologists.

WILLIAM M. KLASE, retired pipeline official of Oil City, Pa., has been appointed as a member of Local Selective Service Board No. 3 in Oil City. He had been associated with the Northern group of pipe lines until his retirement 3 years ago.

MORRIS CANNAN, assistant district geologist for the Bridwell Oil Co., Alice, Tex., has resigned and is now associated with the Midstates Oil Corp., at Alice as geological scout in the Southwest Texas district.

T. CECIL WRAY has been appointed to the position of superintendent of gas distribution for Memphis Light, Gas and Water Division, succeeding W. S. Merrick, who died July 27. Mr. Wray is a graduate of Carnegie Institute of Technology. He joined the Memphis gas utility in 1928 and for several years has been gas-distribution engineer.

TOM BROWNFIELD, since 1936 head of the scouting and statistical division of the Carter Oil Co.'s exploration department, Tulsa, will be transferred September 1 to New York. There he will assist in handling Carter Oil Co. business in the office of the parent company, Standard Oil Co. (New Jersey). R. B. CURRAN, currently assistant chief scout for Carter, will succeed Mr. Brownfield as division head and in addition to his new duties will continue to supervise field-scouting activities. He will be assisted by RAY D. SLOAN, whose current duties as geologist and supervisor of the crude-oil-reserve section of the division will be expanded to include supervision of all statistical and analytical work.



TOM BROWNFIELD

R. B. CURRAN

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

C. J. Wrightsman of Tulsa has leased the W. A. Page farm near El Dorado, Kans., and intends to erect tanks on it to store surplus oil. There is some talk about a refinery on the tank farm.

Usher Carson of Tulsa has been appointed conservation agent of the Corporation Commission to succeed A. L. Walker, resigned. He will have charge of the Healdton district.

The latest wrinkle on the part of the Corporation Commission of Oklahoma is the creation of an oil and gas bureau to give its exclusive time to the oil and gas industry.

20 YEARS AGO

The Constantin interests, headed by Capt. Eugene Constantin, have purchased the one-third interest of E. E. Schock and others in the Export Oil Corp. Following the sale of his interests, Mr. Shock, who is president of the Indiahoma Refining Co., tendered his resignation as vice president and director of the Export Oil Corp.

On the occasion of the last appearance of the late Enrico Caruso in Tulsa, he visited the Creek County field and saw a well shot. The great tenor was visibly impressed when oil flowed over the derrick top.

E. B. Carter, well-known oil producer and a member of the firm of Carter Brothers, died on Saturday, August 13, at Bemidji, Minn.

10 YEARS AGO

An absolute shutdown of every oil and gas well in the East Texas field was ordered by Gov. Ross Sterling in a martial-law proclamation covering the entire four counties.

Thomas Chestnut, pioneer manufacturer of natural gasoline in the Mid-Continent field, who was engaged in the production of oil as far back as the beginning of the Bradford oil field in Pennsylvania, died at his home in Tulsa, August 17. He was 75.

WES CAUGHRON, scout for Gulf Oil Corp., is being transferred from New Mexico to Chickasha, Okla.

A. F. RICHARD, president and manager of the Big Indian Oil & Development Co., Kansas City, Kans., is in Gainsville, Tex., where he will spend some time.

ALVIN J. MARTIN, district production foreman for the Texas Co., Fayette County, Illinois, has returned with his family from the Pacific Coast, where he visited his parents and fished in the ocean.

M. A. FINNEY has completed his assignment in Oklahoma and has returned to Van, Tex., as superintendent for Pure Oil Co. in that area. W. M. PARSONS will continue at Van as Mr. Finney's assistant.

ARTHUR W. STEWART, vice president of Union Oil Co., has returned from a business trip to Orange, Tex., where he went accompanied by other directors on inspection of shipbuilding plant which is a division of Consolidated Steel Corp.

W. A. WARD, oil producer of Wilson, Okla., entertained more than 500 guests at a barbecue at his ranch north of Wilson last week. Among the guests were employes and their relatives of Smith Drilling Co., Tide Water Associated Oil Co., and Gibson-Jennings, Inc.

R. E. NELSON, JR., land man at Amarillo, Tex., in the North Texas district for the Stanolind Oil & Gas Co., will become assistant division land man September 1. He will make his headquarters in Fort Worth. OTIS GAMMILL, of the Fort Worth office, will take over Mr. Nelson's duties at Amarillo.

DAN C. NUFER, geologist for Burke-Greis Oil Co., Tulsa, is recovering in a Tulsa hospital from an appendectomy.

D. A. HULCY, president, Lone Star Gas Corp., has been nominated for a 2-year term as a director of the American Gas Association.

GEORGE A. SCHWAB, superintendent of the land department of Barnsdall Oil Co., Tulsa, has recovered from an attack of pneumonia.

B. A. HARDEY was elected chairman, JAMES W. SMITHER, vice chairman, and JOHN L. CONNER, secretary of the Louisiana Board of Minerals at a recent meeting.

GEORGE J. HARMAN, marine salesman for more than 30 years for Standard Oil Co. of Indiana, will retire on company annuity September 1. He joined the company in 1903.

EDWIN W. PAULEY, president of Petrol Corp. of California, is being sent to England to study the oil situation in that country in all its phases which will include the rationing system to determine whether it is applicable in the United States.

R. T. HASLAM, general sales manager of the Standard Oil Co. of New Jersey, has completed a sales tour of the eastern marketing territory of the company with a party of divisional sales managers. The tour included inspection of work on the pipe line being built from Portland, Me., to Montreal, Canada, by the Jersey company's subsidiary, Portland Pipe Line Co.

Qualified for Post

Experience of 33 years in the petroleum industry is the background that qualifies R. S. Shannon, of Denver, Colo., president of Minnelusa Oil Corp., for his new duties as chairman of the production committee of District 4 in the oil coordination program.

R. S. SHANNON

Mr. Shannon entered the oil business at Georgetown, Ky., in 1908 when he accepted employment with Indian Refining Co. Since 1911, when he joined United Oil Co. as refinery and production clerk at Florence, Colo., he has devoted his particular attention to Rocky Mountain oil conditions.

He became general superintendent of the production department of the Continental Oil Producing Co. in 1917 and established headquarters in Denver. Twelve years later he became general superintendent of producing operations in the Rocky Mountain division for Continental Oil Co. and remained in that position until he resigned to enter private business in 1938.

Idleness did not appeal to Mr. Shannon and in January 1939 he became president of Minnelusa Oil Corp., which is actively engaged as an independent producing concern in the Lance Creek field, Wyoming.

Mr. Shannon was born August 27, 1886, in Lexington, Ky. He attended elementary and high school in that city.

THOMAS WOOD, who has been a scout at Bakersfield, Calif., for Shell Oil Co., Inc., has been transferred to Ventura, Calif.

GLEN M. RUBY, consulting geologist, has returned to his Los Angeles, Calif., office from a field trip in Central America.

A. T. JERGINS, Jergins Oil Co., with production in several California oil fields, recently completed his first gas well in the Rio Vista gas field.

TOM CROWELL, economist with Phillips Petroleum Co., Bartlesville, Okla., has resigned his position to accept one with the OPM in Washington, D. C.

T. OTY GROCE, head of the Groce Independent Oil Co., St. Charles, Mo., has been honored by his firm's directors, who voted him a gold watch in appreciation of his services to the organization.

R. E. HAVENSTRITE, president of California Western Oil Co. of Los Angeles, Calif., has left on a trip by airplane to Alaska accompanied by his daughter. Mr. Havenstrite has long been interested in Alaska as a potential oil producer.

JOHN J. MARTIN, manager of the New England division of Socony-Vacuum Oil Co. since late in 1939, has been appointed assistant general manager of the eastern marketing division of the company, with headquarters in New York City. A. L. NICKERSON succeeds Mr. Martin as New England division manager.

JACK FRAZIER, independent operator and drilling contractor of Houston, Tex., left last week for an extended vacation trip to Mexico.

PROF. GEORGE H. FANCHER, petroleum engineering school, University of Texas, Austin, addressed the Houston section, A.I.M.E., at a special dinner meeting Monday evening, August 18, at College Inn. His subject was "Nature of Drilling Mud From Super Centrifuges and X-Ray Analyses."

Shifts: L. B. HOWARD, JR., engineer, Republic Production Co., from Silsbee, Tex., to Houston, Tex.; ORVILLE O. BRAYMER, superintendent, Shell Oil Co., Inc., from Benton, Ill., to McLeansboro, Ill.; N. D. DERBY, superintendent, Loma Oil Co., from Mount Carmel, Ill., to Beeville, Tex.; R. G. DALEY, engineer, Shell Oil Co., Inc., from Oxford, Kans., to Claflin, Kans.; E. K. SCHLUNTZ, engineer, Shell Oil Co., Inc., from McPherson, Kans., to Tulsa; E. I. HEAD, engineer, Gulf Oil Corp., from Cuero, Tex., to Atwood, Kans.; K. M. LAWRENCE, geologist, Amerada Petroleum Corp., from Winnsboro, Tex., to Crawford, Neb.; J. C. JACKSON, geologist, Stanolind Oil & Gas Co., from Odessa, Tex., to Seminole, Tex.; V. A. KNIGHT, manager, Barnsdall Oil Co., from Odessa, Tex., to Victoria, Tex.; MARK H. O'CONNELL, geologist, Cities Service Oil Co., from Jennings, La., to Lafayette, La.; GEORGE O. YOUNG, engineer, Ford, Bacon & Davis, Inc., from Norman, Okla., to Centralia, Kans.; PAUL SEPTER, superintendent, E. V. Shaver Drilling Co., from McPherson, Kans., to Tulsa.

OSCAR R. HOWARD, former Mid-Continent operator and who drilled a number of large wells in the Santa Fe Springs field several years ago, is back on the active list again and is centering his attention on the Inglewood field where deep Miocene production is being developed.

DEAN W. R. WOOLRICH, of the college of engineering, University of Texas, and HOMER P. RAINEY, university president, officiated at the laying of a cornerstone for a new petroleum engineering building on the Texas campus. Into the cornerstone went an oil-soaked splinter of the rig which first discovered oil on university land.

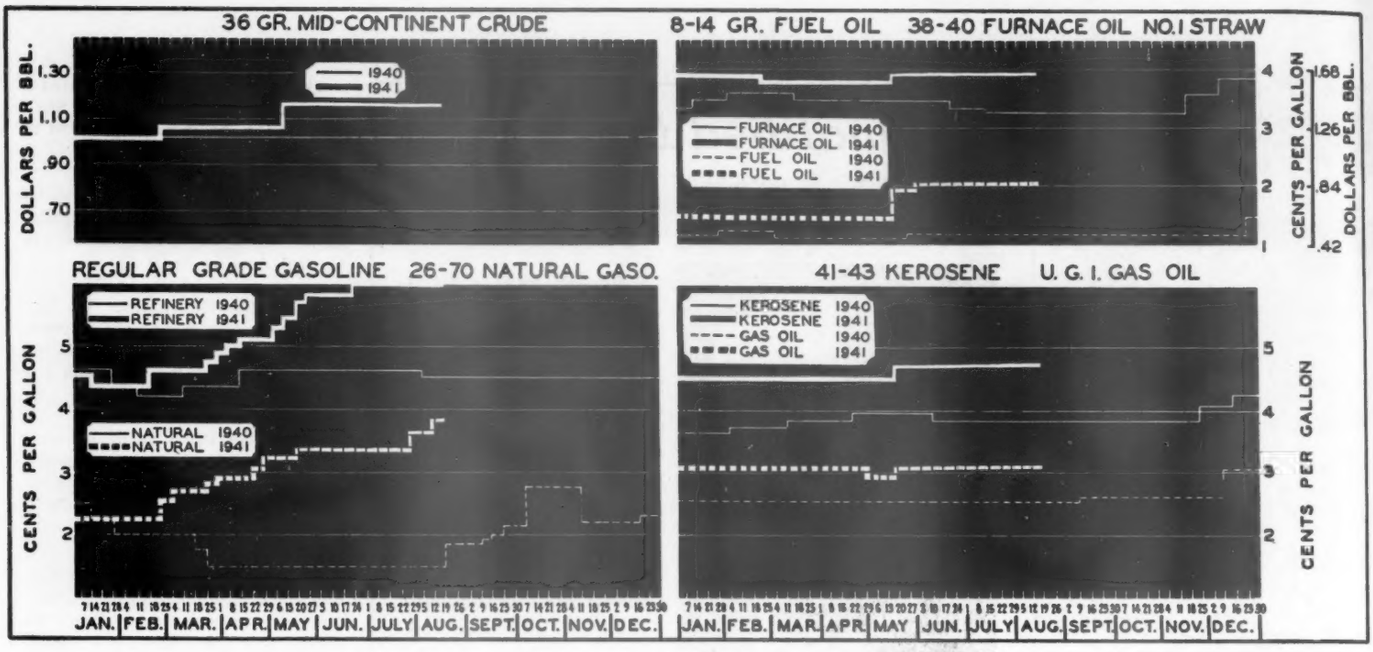
J. E. TURNER, scout for the Continental Oil Co., Houston, Tex., has been elected president of the Gulf Coast Scouts Association, succeeding H. J. ROBERTS, of the Gulf Oil Corp., who as retiring president became a member of the board of directors of the national association. Other officers elected were D. C. FRANSEN, Humble Oil & Refining Co., vice president; JOHN W. CANFIELD, Sinclair Prairie Oil Co., secretary-treasurer; E. M. PINKARD, Pure Oil Co., chairman of the executive committee, and B. G. KRAHN, Texas Gulf Producing Co., sergeant at arms. W. E. BROWN, Shell Oil Co., Inc., was appointed as delegate to the national association nominating committee.

DR. ALOIS CIBULKA, engineer for Humble Oil & Refining Co., at Baytown, Tex., has resigned to devote his time to writing.

B. C. HARMON, assistant division superintendent of production and drilling for the Stanolind Oil & Gas Co., Houston, Tex., returned to his desk last week from a vacation trip to Minnesota.

H. J. WILSON, of Tide Water Associated Oil Co., with offices in San Francisco, Calif., has been appointed chairman of the 1941 committee on fire prevention of the A.P.I. Division of Marketing. Other members of the committee include D. A. BERING, of Shell Oil Co., San Francisco; H. H. HALL, Standard Oil Co. of California, San Francisco; A. L. KNIPPING, JR., General Petroleum Corp., Los Angeles, and GEORGE F. PRUSSING, of Los Angeles.

W. ALTON JONES, president of Cities Service Co., New York; D. W. HARRIS, vice president and general manager of the Arkansas Natural Gas Corp.; B. R. MUIRHEAD and H. T. GOSS, treasurer and chief engineer, respectively, of the same company, of Shreveport, have been named officers of the newly formed Cities Service Defense Corp., which will build and operate a $10,000,000 ammonium picrate plant at Marche, Ark., for the manufacture of explosives and munitions. Mr. Jones is president of the new company, Mr. Harris vice president, Mr. Muirhead is treasurer, and Mr. Goss secretary.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Sellers Maintain Full Control of Mid-Continent Oil Markets

By H. STANLEY NORMAN

SELLERS' control of the Mid-Continent refinery market is growing more absolute with each passing week and the past 7 days were merely a repetition of basic factors that have prevailed since last spring. There is no apparent or threatened shortage of products in the Mid-Continent. Still, current production and requirements are in relatively close balance and prevailing conditions require that the needs of customers be served in the order of their urgency.

There is one exception to the general rule of ample supplies and that is in the case of premium lubricating oils. At least a few of the major manufacturers of premium-price lubricants are no longer offering these oils on the open market. Instructions have been issued to not accept additional accounts for premium lubricants.

One Mid-Continent refiner loaded 80 cars of lubricating oil in recent weeks for shipment to Seattle, Wash., where it was scheduled to be loaded on trans-Pacific vessels for eventual delivery to the U.S.S.R.

Unusual Demand for Lubricants

Provisions of the lend-lease bill have placed an exceptional call on lubricating oils suitable for use in aviation motors. Previously the British and now the U.S.S.R. were supplied chiefly from sources of petroleum outside the United States. However, equipment for the manufacture of high quality lubricating oils is limited outside the United States. Therefore, the call for aviation engine oils from domestic refiners is out of proportion to the demand for other products.

Concerted search for Mid-Continent motor fuel available for prompt or near-future loading continued during the week without abatement. Northern buyers are particularly anxious to arrange for additional supplies to accommodate late summer and fall demand which appears likely to be maintained at approximately the rate of increase prevailing during the summer peak. Still, the normal decline in consumption starting shortly after Labor Day should again prevail and refiners anticipate a breathing spell within the next 2 or 3 weeks.

There has been no opportunity this summer for Mid-Continent refiners to build distillate fuel-oil stocks in proportion to the rate of crude runs to stills. Cracking operations have been maintained at maximum rates in order to satisfy the requirements for motor fuel. This method of refinery operation has resulted in conversion of a portion of distillate fuel-oil fractions into gasoline beyond the normal time that gasoline yields are reduced.

Refined Oil Market Barometer

Tone of the refinery market at interior points continues strong, with offerings for immediate shipment quite restricted. On the East Coast a general increase in kerosene and No. 2 fuel-oil prices was the first widespread advancement since early in June. On the West Coast diversion of tankers to hauling Russian cargoes promises to interfere with transportation of refined products to areas removed from refining centers.

MID-CONTINENT: Lubricants in unusual demand. Natural gasoline prices higher.

GULF COAST: Kerosenes increasingly strong. Other products firm.

CALIFORNIA: Gasoline and diesel oils soft. Market very quiet.

PENNSYLVANIA: Demand strong for all products.

CHICAGO: Kerosene more active. Heavy fuels strong.

Mid-Continent refiners are watching with interest the developments in Pennsylvania crude and lubricating-oil prices. The advance of 23 to 25 cents per barrel posted for Pennsylvania crude last week will give refiners in that section a strong argument for higher product prices on the basis of rising costs. Previously, Leon Henderson, director of OPACS, had ordered a ceiling of 33 cents per gallon on 200-viscosity neutral. The higher crude price posted in Pennsylvania which, incidentally, is a 11-year high for production there, may have full approval of OPACS as a means of increasing output. Production of Pennsylvania crude has been undergoing a regular decline despite the six previous price advances this year.

Pennsylvania Situation Watched

Aspects of the Pennsylvania situation correlative with conditions in other producing areas of the country afford oil men all over the United States an opportunity to appraise the OPACS' reaction to crude-price advances.

Product markets in several sections of the country have just about reached their maximum climb until the general market structure is lifted by higher crude costs. Other producing sections of the country now, or may soon, face the problem of arranging for more crude. Producers contend that current crude prices prevent the scope of exploratory drilling necessary to development of substantial new reserves and make the point that if refiners need more crude they will have to increase the attractions for drilling.

Involved in the complicated balance of crude and product markets is the ability of both refiners and producers to obtain the equipment necessary to maintenance of operations along with expansion of facilities.

Motor fuel and all other products in the Mid-

(Continued on Next Page)

Increasing Scarcity of Supplies Brings Expected Price Rise

By J. P. O'DONNELL

NEW YORK, Aug. 18.—A general advance of 0.3 cent a gallon in the price of No. 2 fuel oil and of 0.1 cent a gallon in kerosene throughout nearly all sections of the East Coast area was the outstanding development of the markets the past week. The increases covered all methods of delivery and were met by practically all major and independent suppliers. Up to the present writing the increase has not been met in the Philadelphia area, but action is expected here at any time.

While last week saw the first general move to advance prices by a major oil company in any of the principal oil products in the Atlantic seaboard area since early in June, spot wholesale prices had already risen above the level of quotations adhered to on contracts and many independent dealers had raised retail quotations to approximately the levels now asked by all East Coast suppliers. The price rise was regarded in local oil-trade circles as inevitable in view of the increasing scarcity of supplies, unusual summer demand for heating oils and high delivered costs made necessary by the tank-steamer shortage.

Within 2 days after the announcement of general price increases in No. 2 fuel oil and kerosene, which were placed in effect by most suppliers on August 13 and 14, some independent dealers here had indicated their intention of raising retail quotations further, in order to protect the margins which they held essential due to higher barge, trucking and labor costs.

While most major and independent suppliers are now quoting No. 2 fuel oil at retail in tank-wagon lots on the basis of 7 cents a gallon, compared with 6.7 cents a gallon previously, a few dealers will raise the retail price in the New York metropolitan area to 7.3 cents a gallon, it is reported. It will be recalled in this connection that some major suppliers have retail contracts outstanding specifying a maximum price of 7.6 cents a gallon to October 31, 1941. These contracts were made before the full significance of the tanker shortage became evident.

The local trade is still confused with respect to the status of rationing. A certain amount of rationing already has been placed in effect throughout the oil trade. This consists in the limitation of sales to dealers by large suppliers, and the rationing of supplies to consumers by many dealers, effected largely as a precautionary measure, to protect the 1941-1942 supplies of No. 2 fuel oil and No. 6 fuel oil. Despite this, many consumers are reported to have been able to fill their fuel-oil tanks during the present usually slack summer season.

As to gasoline rationing, there is now a rather concrete understanding in the trade that the federal oil coordinator's office has yet no definite time in mind for the inauguration of card rationing, simply because the need for such strict control has not yet developed. According to present indications there will be no need for such rationing until about the end of September or October. Whether card rationing will then be enforced will depend on (1) the tanker situation at that time, and (2) weather conditions, which will be an important factor in determining the rate of gasoline used during the fall.

Thus, it can be seen that card rationing is still in an exceedingly indefinite stage. Steps which have been taken by Atlantic Coast states to prepare for such a contingency can be viewed as somewhat premature, although the trade recognizes the value of the preparedness steps which have been adopted. Meanwhile, the measures which have been taken to prepare the public's mind for card rationing, including the closing down of service stations daily from 7 p.m. to 7 a.m., may be extended to include a full Sunday closing some time next month, it is believed.

Gasoline prices in the Atlantic Coast area have remained steady during the past week. Some crosscurrents have been noted, including a tendency for some service stations to offer small concessions. While the first reaction on the part of some service station dealers to the daily closings was to raise retail quotations, further consideration has resulted in an effort on the part of some to attempt to obtain a larger share of the total sales before strict curtailment measures could be applied. It is yet too early to determine how far this trend will be carried out.

The lubricating-oil markets in the East Coast area have remained firm. Following the action of the OPACS in placing a ceiling on Pennsylvania refinery prices for neutral oils, there was a softening tendency in the market for these oils which had risen in this area considerably above the ceiling price. The advance in the price of Pennsylvania Grade crude oil definitely changed the situation, however, and now suppliers are holding to present prices all along the line.

The belief now exists in oil-trade circles that present lubricating-oil prices in the East Coast will hold for some time. Consumption certainly is expected to be maintained at a high level, especially for industrial oils, but a smaller demand for motor oils may preclude too much of a pinch in supplies from now on.

Navy Makes Large Purchase Of Gasoline and Kerosene

HOUSTON, Tex., Aug. 19.—U. S. Navy purchases totaling 835,000 bbl. of gasoline and 970,000 bbl. of kerosene were made the past week. The material, much of which will be supplied direct out of the Gulf Coast, is to be delivered within 30 days. Bids also have been received by the Navy for 600,000 bbl. of gas oil to be delivered out of the Gulf Coast.

Of the gasoline bought, Pan American Refining Co. will supply 300,000 bbl. on the basis of $2.625 per barrel; Sinclair Refining Co., 415,000 bbl. at $2.726 per barrel; Texas Co., 80,000 bbl. at $2.539 per barrel, and Maritime Oil Co. 40,000 bbl. at $2.72 per barrel. Of the kerosene Sinclair Refining Co. will supply 170,000 bbl. at $1.785 per barrel; Standard Oil Co. of New Jersey companies 800,000 bbl. at $1.68 per barrel.

Otherwise the Gulf Coast spot market remained dormant. However, quotations continued firm to strong, with increasing strength being manifest in kerosenes. Kerosenes are generally quoted at 4 cents with very little material available. Bunker C fuel also is very strong, although suppliers have not increased quotations. Gasoline prices still are being quoted firmly at previous high levels but the situation still is ruled by uncertainty brought on by the prospect of a price ceiling below present quotations.

Group 3 Markets

(Continued from Preceding Page)

Continent price list were unchanged this week. Demand is particularly strong for gasoline, residual fuel and natural gasoline. Inquiries for kerosene are increasing but demand is expected to increase substantially during the next 3 weeks when northern buyers start building stocks for the fall consumption.

A.P.I. Weekly Refinery Statistics

Week Ended August 16, 1941

	Capacity reporting (per cent)	Total gasoline stocks (bbl.)	Residual fuel-oil stocks (bbl.)	Gas oil and distillate stocks (bbl.)	Daily crude runs (bbl.)
East Coast	100.0	20,793,000	10,099,000	14,438,000	586,000
Appalachian	83.8	2,993,000	557,000	578,000	123,000
Ind., Ill., and Ky.	84.4	15,127,000	4,135,000	4,871,000	631,000
Okla., Kans., and Mo.	80.7	6,622,000	1,975,000	1,915,000	296,000
Inland Texas	63.2	2,177,000	1,294,000	433,000	136,000
Texas Gulf	91.0	11,361,000	7,837,000	6,274,000	966,000
Louisiana Gulf	89.1	3,324,000	1,755,000	1,656,000	154,000
N. Louisiana and Ark.	49.9	439,000	435,000	306,000	59,000
Rocky Mountains	50.1	1,134,000	444,000	120,000	49,000
California	90.9	14,011,000	65,760,000	11,972,000	573,000
Total reported	86.3	77,981,000	94,291,000	42,563,000	3,573,000
Est. unreported	.....	5,750,000	1,525,000	1,000,000	347,000
*Est. total	.....	†83,731,000	95,816,000	43,563,000	3,920,000
*Est. total previous wk.	.....	86,022,000	95,412,000	42,136,000	3,835,000
*Aug. 17, 1940	.....	86,470,000	106,710,000	42,136,000	3,510,000

*Bureau of Mines. †Includes 7,698,000 bbl. aviation gasoline.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ended August 9, 1941	251,945,000 barrels
Week ended August 2, 1941	252,535,000 barrels
Week ended August 10, 1940	263,607,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

RETAIL OIL MARKETS...

Tank-wagon and filling-station prices on gasoline and kerosene furnished by larger marketing firms

Prices as of August 19, 1941

Taxes

The gasoline quotations given in the following tables include the 1½-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Dlr. tax	Kero. Inc. tank wag.
Chicago, Ill.	16.1	14.1 4.5	10.3
Decatur	16.1	14.4 4.5	9.5
Joliet	16.4	14.1 4.5	10.3
Peoria	16.2	14.7 4.5	10.1
Quincy	15.4	12.4 4.5	10.0
Davenport, Ia.	16.2	14.7 4.5	10.1
Des Moines	15.9	12.9 4.5	9.8
Mason City	16.2	14.7 4.5	10.1
Duluth, Minn.	17.7	16.2 5.5	10.6
Mankato	17.4	15.9 5.5	10.3
Minneapolis	17.4	15.9 5.5	10.3
La Crosse, Wis.	17.4	15.9 5.5	10.3
Green Bay	17.7	16.2 5.5	10.6
Milwaukee	17.6	16.1 5.5	10.5
Detroit, Mich.	15.9	14.4 4.5	9.6
Grand Rapids	15.9	14.4 4.5	9.6
Saginaw	15.9	14.4 4.5	9.6
Evansville, Ind.	16.9	15.4 5.5	9.6
Indianapolis	17.1	15.2 5.5	9.8
South Bend	17.5	16.0 5.5	10.2
Fargo, N. D.	18.4	16.9 5.5	11.3
Huron, S. D.	17.8	16.3 5.5	10.7
Kansas City, Mo.	14.9	13.4 4.5	9.4
St. Louis	13.4	11.9 4.5	9.8
St. Joseph	15.7	14.2 4.5	9.6
Wichita, Kans.	14.8	13.3 4.5	8.0

*State tax 2 cents, 1-cent city tax, and 1½-cent federal tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers. On purchases per month off tank-wagon prices: 1,000 gal. or more, 1.5 cents off, minimum delivery 25 gal.

Stanolex Fuel Oil in Chicago

Effective July 17, 1941, f.o.b. Chicago, tank-wagon prices: Standard heater oil, 1-99 gal., 8.75 cents; 100-149 gal., 7.75 cents; 150 gal. and over, 7.25 cents. Stanolex fuel oil No. 1, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex furnace oil, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex fuel oil A, 1-99 gal., 8.0 cents; 100-399 gal., 7.0 cents; 400-749 gal., 6.0 cents, 750 gal. and over, 5.25 cents. Stanolex fuel oil B, 1-99 gal., 8.0 cents 100-399 gal., 7.0 cents; 400-749 gal., 6.0 cents; 750 gal. and over 5.25 cents. Stanolex Bunker C fuel oil, 1-399 gal., 6.5 cents; 400-999 gal., 5.5 cents; 1,000 gal. and over, 4.5 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Cons'r tank wag.	Dlvided dlr.	Inc. tax	Kero. tank wag.
Ohio points	16.0	15.0	5.5	*9.0

*Includes state tax of 1 cent.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Cons'r tank wag.	Net dlr.	Inc. tax	Kero. tank wag.
Atlanta, Ga.	18.00	18.00	7.5	10.0
Augusta	18.00	18.00	7.5	9.5
Macon	18.00	18.00	7.5	10.0
Savannah	17.00	17.00	7.5	9.0
Birmingham	18.50	18.50	8.5	8.0
Mobile	18.50	18.50	9.5	8.5
Montgomery	19.50	19.50	9.5	10.0
Jackson, Miss.	17.00	17.00	7.5	9.0
Vicksburg	17.00	17.00	7.5	8.5
Jacksonville, Fla.	18.00	18.00	8.5	8.0
Miami	18.00	18.00	8.5	8.0
Pensacola	18.50	18.50	9.5	8.0
Tampa	18.00	18.00	8.5	8.0
Lexington, Ky.	17.00	17.00	6.5	9.0
Covington	15.0	15.0	6.5	9.0
Louisville	16.50	16.50	6.5	8.5
Paducah	16.50	16.50	6.5	8.5

Price basis to tank-wagon consumers, effective January 4, 1937, 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax, and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Atlantic City	13.0	14.0	4.5	7.9
Newark	13.0	14.0	4.5	7.9
Annapolis	13.85	15.35	5.5	9.5
Baltimore	13.25	14.75	5.5	8.7
Cumberland	14.65	16.15	5.5	10.0
Washington, D. C.	11.50	13.00	3.5	9.0
Danville, Va.	15.45	17.45	6.5	10.25
Norfolk	14.25	16.25	6.5	10.00
Petersburg	14.55	16.55	6.5	11.00
Richmond	14.55	16.55	6.5	11.00
Roanoke	15.75	17.75	6.5	10.50
Charles'n, W. Va.	15.55	18.05	6.5	11.5
Parkersburg	14.85	17.35	6.5	11.2
Wheeling	15.25	17.35	6.5	11.8
Charlotte, N. C.	17.40	18.90	7.5	9.3
Hickory	17.95	19.45	7.5	10.3
Mount Airy	17.80	19.30	7.5	9.5
Raleigh	17.15	18.65	7.0	10.3
Salisbury	17.45	18.95	7.5	10.7
Charleston, S. C.	15.25	17.75	7.5	9.25
Columbia	16.10	18.60	7.5	(*)
Spartanburg	16.80	19.30	7.5	(*)

Price basis to Essolene undivided dealers: Dealer tank-wagon price less 0.5 cent per gallon. Price basis to commercial consumers, effective March 3, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at a time by hose connection, on yearly purchases: From 2,500 to 100,000 gal., consumer tank-wagon price at time and place of delivery: 100,000 gal. per year, consumer tank-car price plus 0.5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less 0.5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gal. or more, consumer tank-wagon price. Single deliveries of less than 50 gal., 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less 0.5 cent per gallon. The above policy also applies in South Carolina, effective January 23, 1939.

*Kerosene business of the company at these points now exclusively handled by dealers.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Philadelphia, Pa.	14.0	15.0	5.5	10.0
Pittsburgh	14.5	15.5	5.5	10.5
Allentown	14.5	15.5	5.5	10.5
Erie	14.5	15.5	5.5	10.0
Scranton	14.5	15.5	5.5	10.5
Altoona	14.5	15.5	5.5	10.5
Dover, Del.		15.5	5.5	10.5
Wilmington		15.0	5.5	10.0

Price basis to undivided dealers, dealer tank-wagon price less 0.5 cent per gallon.

Discount on kerosene, 2 cents per gallon off tank-wagon price on tank-wagon deliveries of 25 gal. or more at one time.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank truck	Serv. sta.	Inc. tax	Kero. tank wag.
San Francisco	17.5	18.5	4.5	11.5
Los Angeles	17.0	18.0	4.5	10.0
Fresno, Calif.	18.5	19.5	4.5	12.5
Phoenix, Ariz.	21.5	22.5	6.5	12.5
Reno, Nev.	20.5	21.5	5.5	13.5
Portland, Ore.	20.0	21.0	6.5	13.5
Seattle, Wash.	20.0	21.0	6.5	13.5
Spokane	21.5	22.5	6.5	16.5
Tacoma	20.0	21.0	6.5	13.5

Discount to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gal. and over, advance quantity discount extended at time of delivery, 3 cents. Service-station schedule applies on single deliveries less than 40 gal. On kerosene in tank-car, transport-truck, and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank wagon.

March 18, 1939, split dealer discount was canceled.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Comm. tank wag.	Dlr.* tank wag.	Inc. tax	Kero. tank wag.
Albany	14.2	14.7	5.5	7.7
Met. New York	14.4	14.9	5.5	8.0
Buffalo	14.5	15.0	5.5	8.3
Rochester	15.1	15.6	5.5	8.8
Syracuse	14.8	15.3	5.5	8.7
Portland, Me.	14.6	15.1	5.5	8.1
Manchester, N. M.	15.6	16.1	5.5	9.0
Burlington, Vt.	15.2	15.7	5.5	8.3
Boston, Mass.	13.2	13.7	4.5	8.0
Worcester	13.8	14.3	4.5	8.1
Hartford, Conn.	13.9	14.4	4.5	7.6
New Haven	13.3	13.8	4.5	6.9
Providence, R. I.	13.3	13.8	4.5	7.8

*Undivided.

Effective August 8, 1940, the company changed its commercial consumer policy in New York and New England to the following:

Full compartment deliveries: Accounts buying less than 20,000 gal. annually, 0.5 cent above the commercial-consumer price; accounts buying from 20,000 to 120,000 gal. annually, commercial-consumer price; accounts buying 120,000 gal. annually and above, 0.25 cent off consumer price. Split compartment deliveries: Delivery of less than a full compartment, 250 gal., commercial-consumer price plus 1 cent. Steel-barrel deliveries: Commercial price plus 3 cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Inc. tax	Kero. tank wag.
Denver, Colo.	14.5	5.5	11.0
Grand Junction	18.0	5.5	12.5
Pueblo	14.5	5.5	9.5
Casper, Wyo.	17.0	5.5	12.0
Cheyenne	16.0	5.5	11.5
Billings, Mont.	18.0	6.5	12.5
Butte	17.0	6.5	13.5
Great Falls	17.0	6.5	12.5
Helena	17.0	6.5	13.0
Salt Lake, Utah	18.5	6.5	14.5
Boise, Idaho	†20.1	6.5	16.5
Twin Falls	†21.1	6.5	17.0
Albuquerque, N. M.	*17.5	7.0	10.0
Roswell	*15.5	7.0	8.5
Santa Fe	‡18.0	7.5	10.0

*Includes city tax of 0.5 cent. †Includes toll-bridge tax of 1 mill. ‡Includes city tax of 1 cent.

Tank wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Cons'r tank car	Dlr. tank wag.	Incl. tax	Kero. tank wag.
New Orleans, La.	15.25	17.25	8.5	‡10.0
Baton Rouge	15.25	17.25	8.5	‡10.5
Alexandria	15.25	17.25	8.5	‡10.5
Lafayette	15.50	18.00	8.5	‡10.0
Lake Charles	15.50	18.00	8.5	‡10.0
Shreveport	15.0	17.5	8.5	10.0
Knoxville, Tenn.	18.00	20.50	8.5	12.5
Memphis	16.25	18.75	8.5	10.5
Chattanooga	17.50	19.5	8.5	11.0
Nashville	17.75	19.5	8.5	10.0
Bristol	18.25	18.75	8.5	12.0

Essolene at dealer price less 0.5 cent per gallon to undivided dealers.

‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gal. or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gal. at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less 0.5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gal., consumer tank car plus 2 cents per gallon 50 to 199 gal., consumer tank car plus 1 cent per gallon; 200 gal. and over, consumer tank car plus 0.5 cent per gallon.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Incl. tax	Kero. tank wag.
Texarkana, Ark.	14.0	5.5	6.0
Fort Smith	15.5	7.0	6.5
Little Rock	17.25	8.0	8.0
Muskogee, Okla.	15.5	7.0	8.0
Oklahoma City	15.0	7.0	8.0
Tulsa	15.0	7.0	8.0

Tank wagon represents price to consumers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Dlr.	Incl. tax	Kero. tank wag.
Omaha	17.9	15.4	6.5	9.8
McCook	18.5	15.9	6.5	9.5
Norfolk	18.4	16.9	6.5	10.3
North Platte	18.8	16.4	6.5	10.7
Scottsbluff	18.9	16.0	6.0	10.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Texas

	Gasoline Tank wag.	Serv. sta.	Incl. tax	Kero. tank wag.
Dallas, Tex.	13.0	16.5	5.5	7.0
Fort Worth	13.0	16.5	5.5	7.0
Houston	13.0	17.0	5.5	8.0
San Antonio	13.0	17.0	5.5	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	16.2
V.M.&P. naphtha	16.5
Cleaners' naphtha	15.5
Stanisol	15.5

*Prices include 3-cent Illinois tax but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gal. lots if covered by contract.

Canada*

3-Star Imperial Gasoline

IMPERIAL OIL, LTD.

	Gasoline Tank wag.	Incl. tax	Kero. tank wag.
Halifax, N. S.	28.5	13.0	19.0
St. John, N. B.	28.5	13.0	19.0
Montreal, Que.	27.0	11.0	17.5
Toronto, Ont.	27.5	11.0	18.0
Hamilton, Ont.	27.5	11.0	18.0
Winnipeg, Man.	30.5	10.0	22.5
Brandon, Man.	31.0	10.0	23.0
Regina, Sask.	28.0	10.0	20.0
Saskatoon, Sask.	30.8	10.0	22.8
Edmonton, Alta.	28.9	10.0	20.9
Calgary, Alta.	26.0	10.0	18.0
Vancouver, B. C.	25.0	10.0	24.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In Maritime Provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. (Indiana) August 8 advanced tank-wagon gasoline 0.7 cent and on August 13 reduced dealer gasoline 0.5 cent at Decatur, Ill.; August 12 reduced tank-wagon and dealer gasoline 1 cent at St. Louis, Mo.

Standard Oil Co. of New Jersey August 14 advanced tank-wagon kerosene 0.1 cent at Atlantic City and Newark, N. J., and 0.2 cent at Baltimore, Md.

Socony-Vacuum Oil Co., Inc., August 13 advanced tank-wagon kerosene prices 0.1 cent at Albany, metropolitan New York, Portland, Manchester, Burlington, Boston, Worcester, Hartford, New Haven and Providence.

PRICES OF REFINED PRODUCTS...

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 19, 1941
(Most prices in cents per gallon)

The quotations are exclusive of the federal excise taxes of 1.5 cents a gallon on gasoline and 4 cents a gallon on lubricating oils. Octane ratings in Middle West, Mid-Continent, and Southwest are based on A.S.T.M. method of testing.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055
60-62 400 grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055

NORTH TEXAS—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
63-66 octane	.0550	.06
60 octane and below	.05125	.05375
60-62 400	.05	.06

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
63-66 octane	.0550	.05875
60 octane and below	.05	.06

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
60 octane and below	.05	.05375

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055
60-62 400 grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055

PENNSYLVANIA (inland refineries)—

74-76 octane (regular)	.0750	.0775
80 octane (1939 Research)		.0800

CALIFORNIA (domestic movement)—

58-60 400, 65 oct. and higher	.06	.07
54-58 U. S. Motor	.0575	.0625

EAST COAST (domestic)—

U. S. Motor (minimum 72 octane):		
New York (Bayonne) *	.08	.085
Philadelphia	.08	.0825
Boston	.085	.09
Baltimore	.08	.0825
Charleston, S. C.	.0725	.0775

*All grades of gasoline ½ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
80 (research)		.0625
72-74 octane (leaded)	.0575	.05875
70-72 octane (unleaded)	.05875	.06
68-70 octane (unleaded)	.05625	.05875

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.0375
Grade 18-55	.04375	.045

NORTH TEXAS—

Grade 26-70		.03375
Grade 18-55		.04

CALIFORNIA—

75-85 375-390	.045	.05

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.0325

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p. 110-flash, 540-550 e.p.	.0375	.03875
41-43 gr., 300-320 l.b.p., 110-125 flash, 500-520 e.p.	.03875	.04
46-48 gr., 210-230 l.b.p. 480 max., e.p.	.04125	.0425

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

NORTH TEXAS—

41-43	.0425	.04625

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04375	.04625

ARKANSAS (Ark. and N. La. del.)—

41-43	.04375	.04625

PENNSYLVANIA (inland refineries)

46	.06	.0625
45	.06	.06125

CHICAGO (Based on Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

CALIFORNIA (Pac. Coast market)—

38-40 high-burning test	.045	.055

NEW YORK (Bayonne, N. J.)—

41-43		.055

GULF COAST (domestic)*—

41-43		.04

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.04	.0425
No. 1 white (38-42)	.03875	.04125
No. 1 straw (38-40)	.0350	.03625
No. 2 straw (32-36)	.0350	.03625
No. 3 zero to 10 (28-32)	.03375	.0350

NORTH TEXAS—

No. 1 white (38-42)	.0375	.03825
No. 1 white (38-42)	.03825	.04125

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2 (32-36)	.0325	.03375

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36	.0325	.03375

CHICAGO (Based on Group 3)—

Range oil	.04	.0425
No. 1 white (38-42)	.03825	.04125
No. 2 straw (32-36)	.035	.03625
No. 3 zero to 15 (28-32)	.03375	.035

NEW YORK (Bayonne, N. J.)—

*No. 1		.055
*No. 2	.051	.0525
*No. 3	.051	.0525

*Barge deliveries ⅛ to ¼ cent under above tank-car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

No. 5, low pour point (18-22)	.95	.90
No. 6, 15 and above (10-16)	.85	.90

NORTH TEXAS—

No. 5, low pour point (18-22)	.80	.85
No. 6, 15 and above (10-16)	.80	.85

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.0325	.035
No. 5, low pour point (18-22)	.85	.90
No. 5, 15 and above (18-22)	.85	.90
No. 6, low pour point (10-16)	.85	.90
No. 6, 15 and above (10-16)	.85	.90

PENNSYLVANIA (inland refineries)—

36-40	.05875	.06

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.10	1.25
24 plus diesel, per bbl.	1.10	1.25
24 plus diesel (bunkers)	1.20	1.35
12-16 (bunkers at tidewater)	.75	.85
10-16 (cargo lots)	.75	.85
12-17 (tank cars)	.65	.75
10-17 (high sulfur)	.55	.65
San Joaquin Valley:		
10-18 (tank cars)	.70	.85
24 plus diesel, per bbl.	1.10	1.25
San Francisco:		
24 plus diesel, per bbl.	1.35	1.40
24 plus diesel (bunkers)	1.40	1.50
10-16 (bunkers)	.80	.85

GULF COAST—

No. 2 fuel	.0325	.035
43-47 diesel	.035	.03375
48-52 diesel	.03375	.03625
53-57 diesel	.035	.03875
58-and-above diesel	.03625	.0375
Diesel bunkers		1.45
Bunker C (bulk cargoes)	.85	.90
Bunker C (bunkers)		.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.050
28-30 diesel (lighterage 6¼c per bbl.)		2.00
28-30 diesel (tank cars)		.05
Bunker C (to ocean-going ships in N. Y. Harbor	$1.35	1.45
Industrial fuel (tank cars)		.044

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

200-210 D, 10-25		.25
150-160 D, 0-10		.21
150-160 D, 10-25		.205
100-110 D, 0-10		.205
100-110 D, 10-25		.20
Steam refined:		
600 dark green (untreated)		.125

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pour point		.295
15 pour point		.285
25 pour point	.25	.27
Steam refined:		
600	.14	.15
650	.14	.16
600 flash	.14	.16
630 flash	.15	.17

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

0-10 pour point:		
150-3		.125
180-3		.13
200-3		.13
250-3		.145
280-3		.155
280-4		.15
300-3		.165
350-3½		.17
400-3½		.185
500-3½		.19
600-3½		.19
100-2½ paraffin oil 10-25		.0725
10-25 pour point:		
200-3		.125
250-3		.14
280-3		.15
280-4		.145

CALIFORNIA (moving to dom. mkt.)—

Pale oils:		
200-2½-3	.0725	.08
300-2½-3	.0725	.08
400-3-4	.0725	.08
450-3-4	.0725	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.0725	.08
300-5-6	.0725	.08
350-5-6	.0925	.115
400-5-6	.0925	.115
450-5-6	.0925	.115
500-5-6	.095	.115
600-5-6½	.0925	.115
700-6½ plus	.0925	.115
750-6½ plus	.0925	.115
900-6½ plus	.0925	.115

GULF COAST—

Pale oils:		
100-3	.0625	0.650
200-3	.0850	.0875
300-3	.09	.0925
500-3½	.0975	.10
750-3½	.10	.1025
1,200-3½	.1025	.10375
2,000-4	.1050	.1075
3,000-4	.1225	.1250

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pour point		.385
10 pour point		.375
15 pour point		.365
25 pour point	.31	.35
200 vis., at 70° F., 3 color:		
Zero pour point		.40
10 pour point		.395
15 pour point		.385
25 pour point	.33	.37

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (A.m.p.) w.c. scale	.05	.0525

PENNSYLVANIA (inland refineries)—

122-124 (A.m.p.) w.c. scale	.0515	.0525
124-126 (A.m.p.) w.c. scale	.0515	.0525

NEW YORK—

Wax in bags fully refined:		
125-127 (A.m.p.) wax	.0560	.0640
128-130 (A.m.p.) wax	.0560	.0660
130-132 (A.m.p.) wax		.0585
133-135 (A.m.p.) wax		.0615
135-137 (A.m.p.) wax		.0640
Crude scale:		
124-126 (A.m.p.) w.s.	.05	.0525
124-126 (A.m.p.) y.s.	.05	.0525
Petrolatum in barrels, carload lots:		
Dark green		.02875
Amber	.02875	.03125
Extra amber	.03125	.03375
Lily white	.04875	.05375
Snow white	.05625	.05750
Cream	.04125	.05250

Export Prices

GASOLINE

GULF COAST—

60-62 400	.05125	.065
61-63 390	.05625	.0625
64-66 375	.05625	.0625

LOS ANGELES—

U. S. Motor grades:		
Above 69 octane	.0575	.06
65-69 octane	.055	.0575
60-65 octane	.0475	.0525

KEROSENE

GULF COAST—

41-43 water white	.035	.0375

LOS ANGELES—

41-43 water white	.05	.0525

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (i.a.s. in bbl.)—

Cylinder stocks:		
600 S.R. unfiltered		.23
630 S.R. unfiltered		.235
600 flash, S.R.		.24
650 flash, S.R.		.25
Bright stock:		
Light, 25 pour point	.34	.35

NEUTRAL OIL

200-3 color	.43	.50
150-3 color	.41	.46

PARAFFIN WAX

NEW YORK (prices per bbl.)—

123-125 A.m.p.	.0560	.0625
125-127 A.m.p.	.0560	.0625
128-130 A.m.p.	.0585	.0650
133-135 A.m.p.	.0615	.0700
135-137 A.m.p.	.0640	.0700
Crude scale:		
124-126 w.s.	.05	.0525
124-126 y.s.	.05	.0525

MARKET RECORD OF ACTIVE OIL STOCKS . . .

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1941 High	1941 Low	Week ended Aug. 16 High	Week ended Aug. 16 Low	Week ended Aug. 16 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
63½	44	60⅝	59	59	Amerada Corp.	788,675	N.P.	50cQ	7-31-41	$2.00	$2.25	$1.56	58½	38½	74½	50
24¼	19½	22½	21½	22	Atlantic Refining	2,663,999	$25	25cQ	9-15-41	1.00	2.11	1.66	27⅛	18¼	24⅝	18⅛
10½	7	9⅛	8⅞	8⅞	Barber Asphalt Co.	390,223	$10	25c	5-21-40	.50	—.48	1.39	16⅝	8½	21	10¼
10½	7⅝	10	9½	9⅞	Barnsdall Oil Co.	2,558,779	$5	15c	9-8-41	.60	.97	.76	13⅜	7⅛	19½	11⅛
6½	5¼	6	5⅞	6	Consolidated Oil Corp.	13,751,726	N.P.	12½cQ	8-15-41	.72½	.28	.55	8⅛	5½	9⅞	6½
26¾	17⅜	25	24⅛	24¼	Continental Oil of Delaware	4,682,572	$5	25cQ	9-29-41	1.00	.92	1.35	25	16⅛	31½	19⅞
5	3½	4¼	4	4	Houston Oil	1,098,618	$25	....	10-17-30	....	.30	.43	6⅞	3⅜	9⅜	4½
13⅜	9⅝	..	..	..	Lion Oil Refining	435,815	N.P.	25cQ	7-15-41	1.00	1.05	1.50	14⅜	9	18⅛	10
17⅞	13	16⅞	16¼	16⅞	Mid-Continent Petroleum	1,857,912	$10	40c	6-21-41	.80	1.60	1.42	17⅜	11½	18	11⅛
14⅜	9⅜	13⅜	12¾	13	Mission Corporation	1,378,645	$10	25c	12-20-40	.25	1.01	.87	11¾	7⅛	14⅞	8¾
7⅞	4¼	7	6⅝	7	National Supply	1,155,517	$10	....	12-22-37	....	—.49	—.87	9¾	4⅝	15½	5⅝
10	6¾	9¼	8¾	9	Ohio Oil Co.	6,563,377	N.P.	25c	6-14-41	....	1.02	—.10	8¾	5⅜	10½	6
9⅝	5½	8⅜	8⅜	8⅜	Pacific Western Oil	1,000,000	N.P.	40c	12-19-39	....	—.21	.81	8⅞	5½	11⅞	7
10½	7¼	..	..	..	Pan American Pet. Trans.	4,702,945	$5	25c	12-21-40	.25	1.20	1.10	10⅛	6⅜	8⅝	5
46	35¾	45	43½	43¾	Phillips Petroleum	4,449,052	N.P.	50cQ	8-30-41	2.00	2.60	2.21	41¾	27½	46½	31¼
17	14¼	16	15½	16	Plymouth Oil Co.	1,038,633	$5	30c	6-30-41	‡1.30	1.38	2.38	22¾	15	24	17⅛
10¾	7	9⅞	9¼	9½	Pure Oil Co.	3,982,031	N.P.	25c	12-20-40	.25	1.21	1.11	11½	6⅜	11⅜	6⅛
10½	7¼	10¼	9½	10¼	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-40	.50	.95	.65	9¼	5⅞	10¼	6⅝
17	12½	15	14¾	14¾	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	9-15-41	1.00	1.05	1.40	20	11	24⅜	15½
15¾	10⅛	14¾	14⅛	14¼	Shell Union Oil	13,070,625	N.P.	40c	7-21-41	.75	1.05	.77	13⅛	7⅝	17¼	9⅞
32⅞	18⅞	30¾	29¼	29¼	Skelly Oil	995,349	$15	50c	7-30-41	1.25	3.28	1.99	23¼	12¼	29½	15½
10¾	8¼	9⅜	9⅛	9¼	Socony-Vacuum	31,206,071	$15	25cSA	9-15-41	.50	1.17	1.10	12½	7⅛	15⅛	10¼
24⅝	17⅞	23⅝	22⅞	23¼	Standard Oil of California	13,003,953	N.P.	35c†	9-15-41	1.00	1.73	1.38	26⅛	16¼	33⅝	24¼
34⅛	25½	33½	31¾	31¾	Standard Oil (Indiana)	15,272,020	$25	50c†	9-15-41	1.50	2.20	2.23	29	20⅝	30	33¾
45⅝	33	42¼	41½	42	Standard Oil of New Jersey	27,280,998	$25	1.00†	6-16-41	1.75	4.54	3.26	46½	29⅞	53½	38
48½	34¼	45¼	44⅞	44⅞	Standard Oil of Ohio	753,740	$25	75c†	9-15-41	2.00	7.44	6.64	41⅜	26⅛	32⅜	17
60½	50	56⅛	55⅞	55⅞	Sun Oil	2,434,863	N.P.	25cQ	9-15-41	*1.00	3.03	2.74	65⅞	46⅜	66	45⅝
2⅜	1⅜	2	1⅞	1⅞	Superior Oil Corp.	1,388,979	$1	10c	12-28-40	.10	.11	.04	2½	1⅛	3⅝	1⅜
44¾	34½	42½	40⅝	41¼	Texas Corp.	10,876,139	$25	50cQ	7-1-41	2.00	2.90	3.02	47⅝	33	50⅝	32½
4⅛	2⅞	3⅝	3½	3½	Texas Gulf Producing Co.	888,147	N.P.	10c	6-14-41	.20	.63	.69	4¼	2½	5⅜	3¼
7¾	5¼	7⅛	7	7⅛	Texas Pacific Coal & Oil	888,236	$10	10c	9-2-41	.40	.54	1.00	8⅝	5⅜	11⅜	7
11¼	9⅜	10½	10	10½	Tide Water Associated	6,371,827	$10	25c†	9-2-41	.70	1.14	1.05	12	8⅜	14¼	9½
15¼	12¾	15⅜	15⅛	15⅛	Union Oil Co. of California	4,666,270	$25	25c	8-9-41	1.00	.99	1.25	17½	12	19⅜	15⅛
31	25⅝	30¼	29	29	Union Tank Car Co.	1,177,381	N.P.	50c	9-2-41	1.75	2.22	2.07	29⅞	22¾	24¼	20¼
2⅜	1⅝	2⅛	2⅛	2⅛	Wilcox Oil & Gas	470.768	$5	10c	2-15-40	.	.35	.77	3⅝	1⅜	4¼	2⅜

*Also 5 per cent in stock. †Includes extras. ‡Also 2 per cent in stock. —Deficit.

New York Curb Exchange

1941 High	1941 Low	Week ended Aug. 16 High	Week ended Aug. 16 Low	Week ended Aug. 16 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
¾	1	1/16	1/16	1/16	American Maracaibo Co.	1,778,415	$1	....	.....	....	—$0.04	—$0.05	⅛	¼	1¼	¼
7⅝	5⅛	7	7	7	American Republics Corp.	1,308,049	$10	10c	7-10-41	....	.78	.14	10¾	4½	11⅜	5½
1¾	1	1⅝	1½	1½	Bridgeport Machine Co.	263,700	N.P.	$1.25	12-30-37	....	—.88	—.95	3¼	1⅜	7¼	2½
46	36½	45¾	45	45¾	Buckeye Pipe Line Co.	200,000	$50	$1	9-15-41	$4.00	5.09	3.13	43	28	34¾	26½
110¼	87	100	100	100	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-23-41	6.00	6.33	7.87	117	95	130	108⅝
6⅝	3⅝	5⅛	4⅞	5	Cities Service (new)	3,703,978	$10	....	6-1-32	....	1.72	.68	6¾	4	9⅛	4⅛
1¾	⅝	1½	1⅜	1½	Cosden Petroleum	465,804	$1	....	.....	....	—.34	.15	2⅛	⅝	2¼	½
19¾	12½	17⅛	16¾	16¾	Creole Petroleum	6,974,356	$5	50cSA†	6-16-41	1.00	.98	1.38	24¼	11⅝	28	16¾
9	3¾	8¼	8⅛	8⅛	Darby Petroleum	351,390	$5	25c	7-15-41	....	1.12	.03	4⅜	2⅞	7⅛	3⅝
2¼	1	1⅞	1⅞	1⅞	Derby Oil & Refining	263,162	N.P.	....	.....	....	.12	—.37	2	¾	2⅝	1½
28¾	21¼	..	..	..	Eureka Pipe Line	50,000	$50	50c	8-1-41	2.25	—.49	.63	31	20¼	23	15⅛
39	29	36¼	35⅜	35¼	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-41	1.25	2.44	1.69	39⅞	25⅛	45⅛	29¼
64⅝	52¾	64	63	63⅝	Humble Oil & Refining	8,987,840	N.P.	37½c	7-1-41	2.00	3.13	3.33	68	47⅛	71	42½
7	5⅜	6⅝	6½	6½	Imperial Oil of Canada	26,965,078	N.P.	25c	6-2-41	.62½	.65	.71	12⅜	5⅜	17	11⅜
5	2¾	4½	4⅜	4⅜	Indiana Pipe Line	300,000	$7.50	20c	11-15-40	*2.80	.09	.33	7¾	3	7⅛	5½
11	8⅞	10⅛	9⅞	9⅞	International Petroleum	14,324,088	N.P.	50c	6-2-41	1.25	.94	1.19	10¾	8¼	27½	17
2⅝	1⅜	..	..	..	Kirby Petroleum Co.	500.000	$1	10c	3-15-41	....	.16	.06	2¾	1⅝	3¾	2⅛
10⅛	8½	8⅞	8⅝	8⅞	Lone Star Gas	5,518,347	N.P.	20c	8-22-41	.70	1.17	.98	10¾	7⅝	10½	7⅛
5⅝	4⅛	5¼	5	5	Louisiana Land & Exp.	2,966,762	$1	10c	9-15-41	.35	.29	.22	6¼	3¾	7¾	4
10	9½	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	7-10-41	1.00	1.02	1.52	17	9¼	17	14½
4⅛	2½	4	4	4	Middle States Petroleum "A"	291,970	$1	37c	1-31-41	.63	.31	.37	4½	2⅜	5⅜	2¾
8	7	8	7¾	8	Midwest Oil Co.	998,474	$10	45c	6-16-41	.90	.88	.99	8½	5½	8⅜	6⅝
6⅛	5⅛	5½	5½	5½	Mountain Producers	1,593,584	$10	30cSA	6-16-41	.60	.58	.70	6¼	4⅞	6	4⅞
12⅜	10⅛	11⅜	11⅛	11¼	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-41	1.00	1.12	.95	13⅛	10	14	11¼
12⅞	10¼	12¼	11⅝	11⅝	National Transit	509,000	$12.50	50c	6-16-41	1.00	1.08	.91	12½	8⅜	9½	7¼
2¼	1	2	2	2	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.03	.02	1¼	⅜	1⅜	1
8¼	6⅝	..	..	..	New York Transit	100,000	$5	30c	4-15-41	.60	.91	.88	7⅜	5¼	6	4
9¾	7¾	8¾	8¾	8¾	Northern Pipe Line	120,000	$10	50c	6-2-41	.80	.70	.31	9⅞	6	7	4½
4⅛	2⅝	4⅛	4	4⅛	Pantepec Oil	2,856,872	$1	....	.....	....	.02	....	5½	2½	7⅝	4
2⅞	1	2⅜	2⅜	2⅜	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.04	.70	3¼	1	5	1¼
2⅝	2⅛	..	..	..	Ryan Consolidated	298,931	N.P.	10c	12-28-40	.	.43	.16	3	1¼	3	1⅞
8	6½	..	..	..	Southern Pipe Line	100,000	$10	25c	9-2-41	.50	.81	.25	11¾	4¾	4⅞	3½
43	36⅛	42¾	41¾	42⅜	South Penn Oil	1,000,000	$25	37½c	6-27-41	2.50	2.10	2.84	44	28	40½	26⅝
30½	23	26⅛	26⅛	26⅛	Southwest Penna. Pipe Lines	35,000	$50	50c	7-1-41	6.50	3.22	2.06	35	21	23	18
20⅜	17⅞	19⅛	19	19	Standard Oil of Kentucky	2,604,790	$10	25c	6-16-41	1.30	1.47	1.53	20⅞	16½	20⅛	17¼
2	1⅜	1⅞	1¾	1¾	Sunray Oil	1,975,876	$1	5c	12-20-40	.10	.23	.25	2	1⅜	2⅜	1⅜
3¼	2⅝	3	2⅞	2⅞	Texon Oil & Land	936,024	$2	10c	9-26-41	.40	.45	.49	3⅛	2	4	2⅝
3⅞	2¼	4	3⅞	4	Transwestern Oil Co.	750,000	$10	.	.	.	—.59	—1.42	3⅜	2	6	2½
⅛	½	⅝	⅛	⅝	United Gas Corp.	7,818,959	$1	.	.....	.	—.49	—.55	2⅛	⅝	3⅜	1½

*Includes $2.50 capital distribution. †Includes extras. —Deficit.

EQUIPMENT PROGRESS...

New Welded Steel Grating Offered by Klemp Company

A new product with features that will meet with wide approval is offered by Wm. F. Klemp Co., 6611

South Melvina Ave., Chicago, in its welded steel grating, recently announced. Safety, rigidity, durability, self-cleaning, and easy sure-footed travel are assured to an exceptional degree in this one-piece Klemp grating. With marked advance in rugged strength, and neat, simple design, it coincides in every way with the standards of today's construction for passage ways and platforms inside or outside or between buildings, for ramps, stair treads or coverings for flowways.

Klemp welded steel grating is made of hot-rolled hexagonal steel bars placed at right angles on top of flat bearing bars set on edge, and then electrowelded under great pressure. The resultant product is a solid, one-piece construction of great strength. All joints are perfectly smooth—yet the bearing bars and the upper angle of the rods make an efficient nonslip surface. Standard Klemp welded steel grating is made with the main bars on 1 $\frac{1}{16}$-in. centers, in panels 24 in. wide and lengths to 35 ft. Other spacings can be furnished. A "safe-load table" is furnished for bearing depths, and thicknesses to meet requirements.

New "Welderule" Is Time Saver for Arc Welding

Engineers, supervisors, purchasing agents, operators, and all others who use or supervise the use of arc-welding electrodes will want a copy of the new General Electric arc "Welderule" because of the time it saves in estimating electrode requirements. Operating in a manner similar to a slide rule, the arc Welderule reads directly the length of arc-welded joints obtainable per 100 lb. of electrode, also the pounds of weld metal deposited per 100 lb. of electrode. The information covers 11 different commonly used sizes and types of joints; also 22 different sizes and types of popular electrodes in both the 14 and 18-in. lengths.

An additional feature of the arc Welderule is a selector chart which shows the various filler metal classifications as specified by the American Welding Society and the types of electrodes which meet these classifications. This new arc Welderule may be obtained from any local G-E arc-welding distributor or from General Electric Co., Schenectady, N. Y.

Globe Oil Tools Announces New Slush-Pump Piston

The Globe slush-pump piston, a new product for which several new features are claimed, has just been announced by Globe Oil Tools Co. of Los Nietos, Calif.

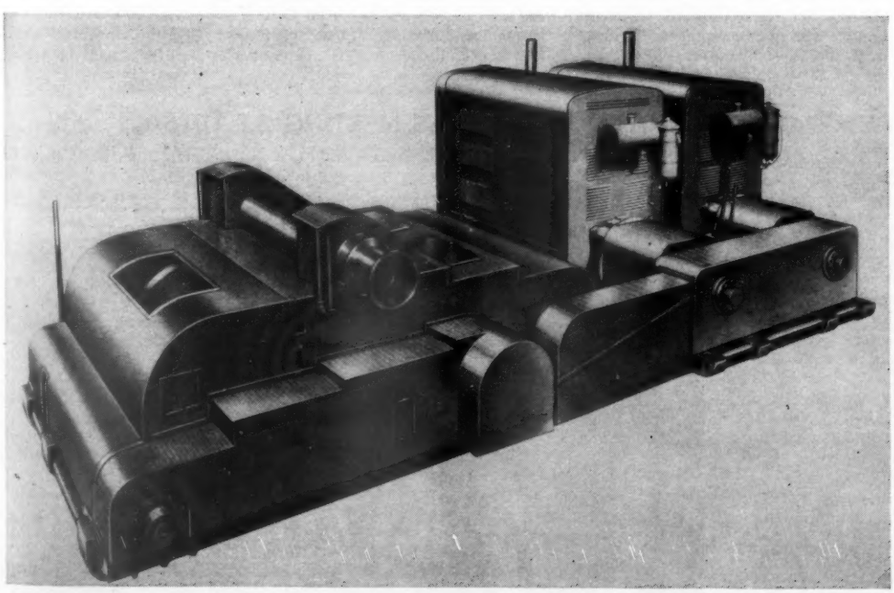
In placing particular emphasis on its superior efficiency and economy, the company states that this new piston "fits the rods, fits the liners, assures maximum fluid per stroke and permits full power of the pump to be utilized, and performs with utmost efficiency because of its perfect working arrangement between rods and liners." Its precision fit on all types of rods prevents washouts and consequent rod failures.

Strength is emphasized at all points of the Globe piston. It consists of only five parts: the body, two rubbers, and two end plates. Forged steel bodies and heavy end plates reinforce the rubbers on all sides except the surface which wipes the liner. The rubbers are moulded around metal disks for added strength, and are held firmly against the center flange by threaded end plates. Rubbers are replaceable and, as a result, piston bodies may be used repeatedly inasmuch as they are relatively unaffected by the operation of the pumps. The savings made possible by this renewal feature are further emphasized by additional savings in transportation costs, and a reduction in inventories.

Durability is a consistent quality of the rubbers, which are uniformly compounded from a tested formula offering maximum resistance to wear, pressure and temperature. This in turn is a special advantage in "lip" construction, where it prevents premature wear and failure under pressure. Detailed information is contained in Bulletin 28, which may be obtained from the manufacturer.

JONES-SHELBURNE-GUFFEY RIGS HAVE PROVED THEIR WORTH

Jones-Shelburne-Guffey rotary rigs have proved their worth by performance. For nearly 4 years they were tested and proved before being placed on the market.

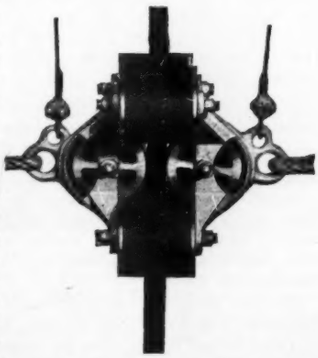


The Spad model is designed for speed drilling up to 5,500 ft. with 4½-in. drill pipe and up to 7,000 ft. with 3½-in. drill pipe depending upon the size engines and rig hook-up plan used. The Super Spad model shown here has a drilling capacity up to 7,500 ft. with 4½-in. drill pipe and up to 10,000 ft. with 3½-in. drill pipe. They are manufactured by Jones, Shelburne & Guffey, Inc., of Oklahoma City, Okla.

Features of these rigs, as pointed out by the manufacturer, include: Unitized draw works and prime movers so that the rig is moved intact and rig-up time is reduced to a few hours; each part is designed so that it may be quickly replaced and at a nominal cost; the free-wheeling drum requires no chains to run while drill pipe is being run in the hole; the new type multiple-tooth positive clutches on the high and low drum drives permit the use of full power in all speeds, giving positive strength with friction action, but cannot be engaged while the chains are running. The transmission is of the helical gear type in an all-steel case with three speeds forward and one reverse.

Improvements Announced In Grizzly Line Saver

Several improvements in the Grizzly "No-Wip" line saver recently have been announced by the manufacturer, E. M. Smith Co., Los Angeles, Calif. All rubber rollers, for example, now are made larger than previously, resulting in longer wear. The cores of these rollers are now packed with grease, and are designed so that lubrication is automatic to both shafts and bearings; thus insuring complete freedom of the rollers and a free-spinning action at all times without necessitating further lubrication of any part of the device while in service. No lubrication,



maintenance or attention is required, therefore, for months at a time.

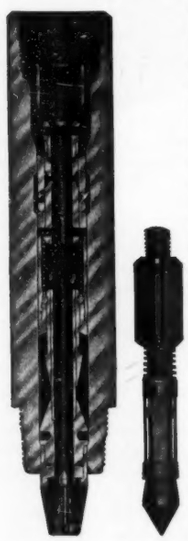
The frame has been provided with extended "ears" and protective plates to prevent the rollers from coming in contact with other objects, or rolling, when the device is lying around or being transported from one place to another. The frame also has been made heavier and stronger.

A new method of locking the rollers in position is provided by a cap that fits snugly over a boss that is an integral part of the frame and prevents the roller shaft from becoming disengaged even if the nut should become loose. This method also relieves the nut of any strain in holding the rollers in place.

The device is designed to eliminate whipping and excessive wear of wire lines in oil-field service. It forces the line to track perfectly, prevents piling up, simplifies spooling, and saves many miles of wire lines every year. Those interested in having further details are asked to send for Bulletin 10-OF.

Retrievable Drop-In Type Back-Pressure Valve

A back-pressure valve which can be installed to act as a drill-pipe float before running the drill string, or can be dropped in after the pipe is partly in the hole, and can be removed before drilling is begun, so that the fluid passage will be open for running wireline core barrels and other tools, is marketed by the Hydril Co., 714 West Olympic Boulevard, Los Angeles, Calif. This device, designated a retrievable drop-in type back-pressure valve, is designed to prevent back flow through the pipe during running or pulling drill pipe, tool. The valve body is shown in the sealing position in the casing, or tubing when no permanent back-pressure valve is desired in the string.



Hydril retrievable drop-in back-pressure valve. Fig. 1 (left)—Valve in sealing position. Fig. 2 (right)—Retrieving tool

The equipment consists of a special sub, the drop-in valve body, and a retrieving tion in Fig. 1, the retrieving tool in Fig. 2. The sub is made up in the string, usually just above the drill collars. When dropped down the drill pipe, the valve body stops at the slight restriction in the lower end of the sub and is automatically locked in place by a series of balls which projects into the recess in the bore of the sub. Pressure from below against the expander squeezes the packer into tight sealing contact, halting upward flow of fluid. Downward circulation and drainage are permitted by the small valve in the nose of the expander.

In order to retrieve the valve body, the retrieving tool is attached to a wire line below a sinker bar and is run down the drill pipe. The retrieving tool forces the mandrel downward against the spring, allowing the balls to recede into the inner groove while the slips engage the upper sleeve. The valve body can then be withdrawn from the pipe, leaving the fluid passage open.

TRADE LITERATURE

GOODALL RUBBER CO. (Dept. M), 5 South 36th Street, Philadelphia, Pa.—Catalog 203, covering safety, sporting and regular boots; service coats and work suits; rubber and oil clothing, aprons, hats; rubber blankets and gloves.

READING-PRATT & CADY DIVISION of AMERICAN CHAIN & CABLE CO., INC., Reading, Pa.—New folder on Union bonnet bronze globe and angle valves covering the new improvements on this line of valves. Three types of seatings are available, regrinding, semi-plug and full plug, as well as three seating materials, bronze, copper-nickel alloy, and stainless steel (12-14 per cent chromium). Steam pressure ratings range from 150 lb. with temperature ratings up to 550° F.

WORTHINGTON PUMP & MACHINERY CORP., Harrison, N. J.—Bulletins W-483-B1, W-304-B2 and S-550-B19. The first bulletin (12 pages) deals with its rotary pumps with double-helical gears, which result in maximum pumping efficiency by eliminating thrust and preventing the trapping of liquid between the teeth. The second (four pages) illustrates and describes its Type U two-stage centrifugal pumps, giving specifications and capacities. The third (18 pages) features its Type LFC angle engine-compressors for refineries, gas transportation lines, gas or air-lift pumping, gasoline plants and other oil industry uses.

FISCHER & PORTER CO., 39 County Line Road, Hatboro, Pa.—Catalog Section 50-A, 8-page bulletin from its 200-page catalog, "Electrically Operated, Remote Indicating, Recording and Integrating Rotometers." Included is a discussion of its more outstanding recent development in the Stabi-Temp induction coil, which has the property of remaining accurate in spite of temperature variations affecting the resistance of the new transmitter coil windings.

DONALDSON CO., INC., 666 Pelham Boulevard, St. Paul, Minn.—Booklet dealing with the company's personnel and commemorating its twenty-fifth anniversary. Also pictured and described are the many applications of its line of air cleaners for trucks, tractors and multicylinder engines in stationary use.

CLARK BROS. CO., INC., Olean, N. Y.—Folder describing and illustrating its new six-cylinder, steam-driven angle compressors available in sizes up to 4,000 hp.

JOHN A. ROEBLING'S SONS CO., Trenton, N. J.—Catalog J-862, on its Parkway cables, both metallic and nonmetallic. Coverings and armors are described and specifications listed for various stranded and solid conductors in both metallic and nonmetallic armors.

AMERICAN ROLLING MILL CO., Middleton, Ohio, is distributing a brochure on the highlights of Armco's advertising history, showing how the company was one of the pioneers in promoting use of a trademark as an identification of quality. The brochure tells how the large manufacturers who made things that weren't sold direct to consumers sat silently behind plant gates until the American Rolling Mill Co. decided in August 1914 to show by advertising copy that its trademark stood for a metal with special qualities. The basic principles of the early Armco appeal, says the brochure, were the same as they are today. Among the prime objectives were to show people that iron and steel sheets differ in quality even if they look alike, to show dealers that customers are interested in what's under the "skin" of every product, to show fabricators that their products are easier to sell when they have consumer acceptance and to show the human side of the basic manufacturing industry.

Refinery Supply Offers Testing Set for Calcite and Feldspar

For the geologist, the calcite and feldspar testing set shown here, offered by the Refinery Supply Co., Tulsa, has proven of great value in identifying sediments that contain dolomite, calcite, small fragments

of feldspar and/or other aluminum silicates. Such stain tests are particularly useful in the field, where a polarizing scope is not available.

New Circuit Interrupter For Hazardous Locations

For disconnecting or interrupting a.c. and d.c. circuits in Class 1 Group D locations where atmospheres contain gasoline, alcohols, natural gas or other explosive vapors, a new nonautomatic circuit interrupter is announced by Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Manually operated, the De-ion circuit interrupter is furnished with a NEMA Type 7 cast enclosure finished in aluminum.

Designed for 250 to 600 volts on a.c. circuits and 125 to 250 volts on d.c. circuits, the units are rated from 50 to 600 amp., depending on the frame sizes. Interrupting capacity is 5,000 to 10,000 amp. Contact burning is reduced to a minimum by De-ion arc quenchers which divide and extinguish arcs almost instantly. Silver or special silver composition with nonwelding characteristics is used for main contacts.

FRED E. COOPER HOLDS 3-DAY SALES MEETING AT TULSA

Fred E. Cooper, Tulsa, held a 3-day sales meeting and service school in Tulsa recently, with salesmen from the United States and Canada attending. Highlight of the meeting was the sales banquet held on Sunday night. Principal speaker was Ernest Franks, manager of power unit sales, Allis-Chalmers Manufacturing Co. Members of the Cooper organization attending the banquet were: H. B. Bloxom, Harold Cooper, E. E. Everson, Louis Gasche, C. V. Small, C. O. Work, H. R. Kramp, Ralph Marshall, W. C. Simpson, W. F. Vorhies, C. F. Nelson, J. A. Cott, Harry Farmer, John Flanagan, E. H. Cochran, Ray Kaib, C. L. Elliott, R. R. Kirkpatrick, E. P. Lee, A. G. Bailey, and G. E. Plank, salesmen; George McNinch, L. A. Wilsey, and Earl Woolbert, engineering department; Kenneth Flett and Kenneth Tate, parts department; Spence Province, Guy Reed, and C. D. Houser, service shop; Howard Appleton, bookkeeper; W. S. Ricketts, gardener; Bill Allen, Alco Machine Works; and Roy Stockton, sales engineer.

AMONG EQUIPMENT MEN...

Schroeder Resigns From Kibele To Join Lucey Products Corp.

Eric G. Schroeder, for many years a partner and sales manager of the Kibele Manufacturing Co., Dallas, Tex., has resigned from the company and disposed of his interest in it to become associated with Franklin E. Bernsen in the Lucey Products Corp., Tulsa. Mr. Schroeder has been actively engaged with the Lucey organization since the first of the year and will continue his offices in the Continental Building at Dallas. He is vice president and a director of Lucey Products, in charge of Texas operations.

ERIC G. SCHROEDER

He is a graduate of the University of Missouri and came to Texas in 1920 and has continued to reside in the state since that time. He has been actively identified with the oil-equipment industry since 1928, first at San Antonio and then at Dallas, to which city he moved in 1935. Mr. Schroeder is well known in Mid-Continent and California oil circles. He is secretary-treasurer of the Dallas Petroleum Club.

C. R. Athy Appointed Vice President of Ideco

C. R. Athy has been named a vice president of International Derrick & Equipment Co. of Ohio. Mr. Athy has been affiliated with the Ideco organization since the early stages of its history, having been its chief engineer for the past 10 years. During this time he was also in charge of research work and he has developed many items of oil-field equipment now in common use. He is active in A.P.I. standardization work and is chairman of the manufacturers' subcommittee on rigs and derricks.

Mr. Athy was graduated from the Ohio State University in 1919 as a chemical engineer. Before joining Ideco, he was associated with the Buckeye Steel Castings Co. and the American Zinc Lead & Smelting Co.

In his new capacity Mr. Athey is relinquishing his duties of chief engineer to L. E. Roelofs. Mr. Roelofs was formerly associated with the American Bridge Co. and also was general manager of the Rogers Structural Steel Co. of Corry, Pa.

BUSINESS NOTES

George Turner of Visco Products Co., Houston, Tex., has been transferred from Oklahoma City, Okla., to Kilgore, Tex., where he will assist Visco's representative, Paul V. Hanlen. Mr. Hanlen has been transferred from Kilgore to Shreveport, La., and will be in charge of the company's East Texas and North Louisiana operations. Mr. Hanlen, after leaving the Marine Corps, has been associated with the oil industry in Texas, Louisiana, and Arkansas for more than 20 years.

Announcement is made by the Peerless Pump Division of the Food Machinery Corp. of the completion and removal of its eastern offices and manufacturing facilities from Massillon, Ohio, to a new and modern plant located at 1250 Camden Avenue, S.W., Canton, Ohio. The Canton plant remains under the same general management, Vernon Edler being vice president and general manager.

J. H. Richardson, who has been district manager for Koalt Engineering Co., Tulsa, in the Gulf Coast area for the past 7 years, has resigned to open and manage an office in Denver, Colo., for the Key Co. of East St. Louis, Ill. Neff S. Cass, who has managed the Dallas office for Koalt Engineering Co. for over 7 years, will succeed Mr. Richardson at Houston.

Stoody Co., manufacturers of hard-facing alloys, grinders and other equipment, recently added another building to its plant in Whittier, Calif. The new building is to be used for demonstrating the application of various hard-facing alloys, for displaying varous types of hard-faced equipment, and for showing educational pictures and slides.

W. W. Gilbert, formerly advertising manager for all divisions of the Watson-Stillman Co., Roselle, N. J., became general office manager of the fittings division on August 1.

Atlas Supply Chief Engineer To Muskogee Headquarters

Transferring his headquarters to the company's main offices, Bruce E. Gold, chief engineer of the Atlas Supply Co., has established his offices at Muskogee, Okla., effective August 15. Having joined the Atlas organization in March 1937, Mr. Gold has maintained headquarters at the Tulsa office and traveled to all the Atlas store points in the interest of machinery sales. The transfer to Muskogee at this time is to secure better coordination between the field stores and headquarters on matters of engineering and machinery sales and service. Mr. Gold was with Caterpillar Tractor Co. in the service department at Peoria, Ill., for 6 months immediately before joining the Atlas organization. Previously he had been 12 years with the Weber Engine Co., Kansas City, Mo., serving as assistant chief engineer from 1930 to 1936. The Tulsa office of Atlas will be continued in charge of S. C. Maples, assisted by J. T. Fretwell.

BRUCE E. GOLD

Major Flannery Called to Active Duty With Engineers

Charles A. Flannery, vice president and Pacific Coast manager of the Industrial Engineering Co., Wilmington, Calif., manufacturers of Somastic pipe coating, has been called to active duty with the Army. Major Flannery is on duty with the Engineers, being stationed at Fort Lewis, Wash. He is an engineering graduate of the University of Illinois, in 1917, and prior to joining Industrial Engineering Co. in 1938 was with the Llewellyn Iron Works and Consolidated Steel Corp.

Douglas R. Brown Heads New Firm, Multiscope, Inc.

Douglas R. Brown, former president of OCS Manufacturing Co., Coffeyville, Kans., is the new president of Multiscope, Inc., a firm recently incorporated in Kansas. The company has leased buildings and ground in the south part of Coffeyville, part of what was formerly the old Kansas Oil Refinery property. The business is expected to get under way before September 1.

Listing $100,000 capitalization, the new company gave as its purpose the designing, assembling, buying and selling of mechanical products, especially devices used for national defense. Since its work has to do with supplying government defense material, little can be divulged of the nature or character of the machines it will manufacture.

The following incorporators were listed: D. R. Brown, E. F. Buckley, Eldon J. Lowe, B. L. Perry and Charles D. Welch, all of Coffeyville.

SPERRY-SUN AWARDS 10-YEAR SERVICE EMBLEMS

A meeting was held at the Houston, Tex., office of the Sperry-Sun Well Surveying Co. recently, when 10-year-service emblems were presented to several employes by G. L. Kothny, vice president and general manager of the company. The emblems were presented to the following: A. B. Palmer, district manager, Lafayette, La.; R. S. Hyer, district manager, Houston; H. A. Wesner, office manager, Houston, and R. C. White, mechanic, Houston.

A 10-year emblem was also presented to George A. Smith of the Philadelphia law firm, Busser and Harding, who, while not a Sperry-Sun employe, has lent invaluable aid to the company since its inception in handling the legal phases of all patent matters and has contributed engineering ideas as well. W. H. Emerson, district manager at Long Beach, Calif., received a 10-year emblem, but this was forwarded to him by mail since he could not be present at the Houston meeting.

The picture of the presentation ceremonies shows Mr. Kothny presenting the first emblem to Mr. Palmer. Others in the photograph are: First row: Dwight C. Roberts, regional manager, Houston; R. C. White, mechanic; H. A. Wesner, office manager, Houston; George A. Smith; R. S. Hyer, district manager, Houston. Second row: Miss Clyde Anglin; Roland Ring, chief engineer; Miss Sarah Alsup; Miss Charlotte Lewis; John Kavsh; William G. B. Morrison, Jr., junior engineer. Third row: E. L. Riley; G. G. Brown; S. O. Butler, Gyro mechanic, W. C. Robins, technical helper.

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For mineral lease or leases, approximately 35,000 acres, divided into blocks of less than 5,000 acres each, extending South from Sec. 14, Township 21 South, Range 22 East, to the Gulf of Mexico, and East of Cammada Bay, situated in the Parish of Lafourche or Jefferson, State of Louisiana.

Specifications including detailed descriptions of lands may be obtained from the undersigned.

Sealed bids will be received at the office of the Mayor of New Orleans, Lousiana, on or before the 26th day of August, 1941.

EDWARD WISNER DONATION ADVISORY COMMITTEE
FRED W. MATTHEWS, Secretary-Treasurer
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FOR SALE: Oil and gas leases and small production located in Kentucky shallow field, also tracts of proven Fluorspar and zinc deposits. Reports on request. W. P. HARLEY, Bowling Green, Kentucky.

U. S. OIL RESERVE lands can be filed for lease on limited acreage by American Citizens. Want several join me in filing block in developing Rocky Mountain Area. Big opportunity. Small expense. Box A-346, The Oil and Gas Journal, Tulsa, Okla.

OWN more than 600 acres in the hot spot of Gray Co., Texas. Will sell some lease and royalty. E. B. Reeves, Alanreed, Texas.

FOR SALE: 160 acres surrounded by production. Major Co. operating lease joining. 750 ft. to sand. Will drill and equip well, assign lease for $2,500.00. Also excellent leases for Repressuring. H. B. Snyder, Box 126, Ottawa, Kans.

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BUY leases on structures where major companies buy. One dollar per acre. 5c rentals, Ten-year term. Write today. Place a little bet on New Mexico.
HARRY S. WRIGHT
Farmington New Mexico

IF YOU are int. in big prod. and have equip. you may drill my 4240 ft. well in cent. Loving Co. Texas pool deeper. Geologist says present 40 gr. oil comes from deeper strata, which recent test showed to be at 4800, 5400, 6200 ft. This is now being done in Ward Co. where 8000 bl. are drilled on same general struc. Will give 600 acres. Investigate. H. Freels, 251 S. Hill, Los Angeles, Cal.

SHALLOW oil discovery. A water well drilling tops Bartlesville oil sand at 435 ft. on 320-acre lease. I offer drill, equip one well, assign lease and well turnkey job for $1250.00. H. B. Buddenborg, Osawatomie, Kans.

NEBRASKA and Western Kansas drilling blocks. Good prospects. Geological Service Bureau, Stuart Bldg., Lincoln, Neb.

CASH paid for producing gas or oil wells anywhere. Old wells considered. G. Gibbs, 7700 Geary, San Francisco, Calif.

TWO new ten-year leases, one forty acres, and a twenty-five acre, both close to Shelbyville wells and new deep test location, Shelby County. Price $5 per acre. C. A. Parker, Box 451, Center, Texas.

NEW MEXICO
Oil and Gas Leases and Royalties.
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TO LEASE—14,000 A. Louisiana Oil Land prov. on 2 sides, ⅛ roy. Action invited. H. Freels, 251 S. Hill St., Los Angeles, Calif.

FOR SALE
All properties and assets of Kessler Oil and Gas Company consisting of producing leases and lease interests and equipment and producing and non-producing royalties in Oklahoma, Kansas and Texas. For information write the company at 604 Petroleum Building, Oklahoma City, Oklahoma. (No employment of brokers authorized.)

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PROPOSED DEVELOPMENT of rich West Texas Sulphur deposits will necessitate employment of several thousand men and building of new town, according to report of engineer for major powder company holding national defense contracts. Minerals belong to the State and obtainable by permit. Have nothing to sell but professional services. Will survey, establish monuments and secure permit covering approximately 20¾ acres for $50. To secure choicest locations wire money and name selected for claim. E. L. STRATTON, Licensed State Land Surveyor, Pecos, Texas.

NEED $10,000 complete smelter makes 99% Antimony. 10,000 ton on dump. Money back in 90 days with 10% int. in mine. Investigate. Can you use 5,000 ton month bentonite $6 ton? H. Freels, 251 S. Hill St., Los Angeles, Cal.

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Ranches—Farm Lands

LOUISIANA FARM
For Sale. Six adjacent counties producing oil. Prospecting now active. 1026 acres of land, fertile fields and timber (Hard woods). Bisected by paved state highway, one mile from railroad station, 150 miles from New Orleans. Reason for wanting to sell is illness. For complete information address A. V. Boutte, Jr., 2536 South Galvez St., New Orleans, La.

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LET US LOCATE your well with the Gravvitational Selector, the answer to the safe development of new pools. It is the quickest, the surest, the cheapest and gets RESULTS when other systems fail. Write Geologist, 14957 Lakewood Heights Boulevard, Lakewood, Ohio.

Situations Wanted

SALESMAN, petroleum engineer, measurement engineer; 36 years old, married; currently and for past 6½ years engaged heavy and technical equipment sales all phases petroleum industry; desire new connection. Would also consider foreign assignment. Reply Box A-613, The Oil and Gas Journal, Tulsa, Okla.

COMPETENT Refinery Superintendent thoroughly experienced. Maintenance, Construction and Operation. Skimming and Cracking Plants. Available Sept. 1st. Box A-620, The Oil and Gas Journal, Tulsa, Okla.

FIELD ENGINEER, 27, thoroughly experienced in electrical well logging and its correlations desires connection with Independent producing firm. Past 3 yrs. spent applying this study to water-shutoffs and increased production. E. E. graduate. Employed. Married. Best references. Reply X, Box 1021, Kilgore, Tex.

Help Wanted

AMERICAN BOOKKEEPER wanted for Independent part time book work and small warehouse; must be familiar with production equipment. Man with some practical production experience preferred. Opportunity to become manager. Living quarters on property. Give complete experience record and salary expected. P. O. Box 99, Great Falls, Montana.

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ROYALTY owners, Oil investors, Unit holders, Stockholders, Operating personnel of oil industry. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Okla.

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FOR SALE—GAS COOLERS: 1—480'-240' and 360'-180' Southwestern make low pressure completely overhauled $1.00 per sq. ft. W. S. Smith, 523 Thompson Bldg., Tulsa, Okla. Phone 2-5473.

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FOR SALE: 125 H.P. 200 W.P. Broderick Boiler, Code Condition. $975. Melton Supply Co., Seminole, Okla.

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